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ABSTRACT

Intended to help interpretive staff identify programmatic needs of disabled U.S. national park visitors, the booklet suggests reasonable modifications to assure participation. An introductory section reviews legal and policy guidelines, the emergence of the disability movement in America, and components of integrated programing. Guidelines and resources are then set forth for working with visitors with the following disabilities: mobility impairments, visual impairments, deafness and hearing impairments, mental or learning impairments (mental retardation, learning disability, and emotional disturbance). General characteristics of each disability are examined. A final section on comprehensive planning and implementation emphasizes a systematic approach to access planning. Appended material includes a program accessibility checklist and a list of audiovisual resources. (CL)

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Interpretation for Disabled Visitors in the National Park System

EC180296

National Park Service
Special Programs and Populations Branch
1984

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Interpretation for Disabled Visitors in the National Park System

Special Programs and Populations Branch
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National Park Service
U.S. Department of the Interior
Washington, D.C.
1984

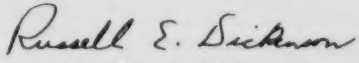
EC 180296

Introduction

Our nation's heritage is preserved through our rich natural, cultural and recreational resources. These resources represent the very essence of our nation and serve as a source of strength, pride and continuity of purpose for our nation's citizens. Park interpretation represents the mechanism whereby the park visitor may receive an understanding of and appreciation for the importance of these national treasures and the need for preserving them. This publication has been written to provide suggestions on how this interpretation can be extended to park visitors who are disabled.

The National Park Service has significantly improved accessibility for disabled visitors over the past few years. However, we realize there is much left to accomplish before we achieve our goal of full accessibility. Our efforts to improve access are evidenced by the number of architectural barriers that have been identified and eliminated. This publication represents our efforts to identify and eliminate programmatic barriers to participation as well.

Whereas policy can be developed and guidelines and standards written to implement policy, words on paper have little meaning if they are not put into action. The degree to which we achieve our goal to provide the highest level of accessibility possible and feasible to disabled visitors is determined solely by the efforts of the park staff and the significance that is placed on these words. Therefore, we rely on you to translate the words in this publication into action to meet the challenge of providing meaningful park experiences that are accessible to all visitors.



Russell E. Dickenson
Director
National Park Service

Foreword

In the past, park interpreters have been primarily involved in planning and operating personal services programs and developing interpretive media designed for our traditional interpretive program users, i.e., family groups and nondisabled park users. These were the visitors we saw daily and therefore the ones we automatically considered when we set out to develop our programs and media for the coming season.

There have been great changes in the past few years, changes in the mix of visitors who are using the national parks, and changes in the awareness and attitudes of our park interpreters. We now recognize our responsibility to provide the basic services necessary to enable all of our visitors to have a safe and enjoyable park experience.

This publication, developed by the Special Programs and Populations Branch working closely with interpreters throughout the nation, provides us with the guidelines and resource information we need to enable us to ensure that we are meeting the interpretive needs of our disabled visitors.

I sincerely recommend that you read it carefully and use the information whenever you are working on revising your programs or developing new services and facilities.

Vernon D. Dame
Chief of Interpretation
National Park Service

Acknowledgements

The material in this publication was developed with extensive input and review by many field interpreters and specialists in the area of serving disabled persons. Unfortunately, there is not room to individually acknowledge all of these people. The Special Programs and Populations Branch would, however, like to acknowledge these people collectively for their assistance and the many hours devoted to review of the guidelines.

Warm appreciation is extended to the field interpreters who were participants in the 1981 and 1982 Interpretation for Special Populations training courses for their valued review of the initial guidelines. Appreciation is also extended to the numerous field Chiefs of Interpretation who comprised the final review team for the guidelines. Finally, we would like to acknowledge the staff of the WASO Branch of Interpretation for their support and guidance during the review process.

Acknowledgement is also extended to NPS Western Region for their *Special Populations Handbook* which was a valuable resource in the development of this publication.

Special thanks goes to Margaret Micholet (Boston NHP) for her professional contributions to the section on mental and learning impairments and to Steven Seven (Big South Fork NRRA) for his support and valuable suggestions.

A very special acknowledgement and appreciation goes to Wendy Ross for her efforts in the development of the guidelines and initial manuscript and the supervision of the guideline review process.

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Section I
Program Access and Overview

"In the planning, construction, and renovation of buildings and facilities and in the provision of programs and services to the public and employees, it is the policy of the National Park Service to provide the highest level of accessibility possible and feasible for persons with visual, hearing, mobility, and mental impairments, consistent with the nature of the area and program and consistent with the obligation to conserve park resources and preserve the quality of the park experience for everyone."

(Special Directive 83-3: Accessibility for Disabled Persons)

Thus states the official policy of the National Park Service with regard to accessibility for disabled persons. The term "accessibility," however, means different things to different people. For most people, it means ramps and elevators for physically disabled persons. But physical access is only one aspect of **"total accessibility."** The other aspect, **"program accessibility,"** relates to the ways in which programs and activities are designed to enable persons with a variety of disabilities to fully participate and have fulfilling experiences—for instance, a museum exhibit placed at a height that corresponds to the height of a wheelchair, or the use of a sign language interpreter on a nature hike.

The above stated policy (Special Directive 83-3) requires access to be provided throughout the National Park System in both facilities **and** programs. This means that every reasonable attempt will be made to enable disabled visitors to get into our buildings and facilities and, once there, to receive the same benefits, services, and information provided to all visitors. The second part of this goal, "to receive the same benefits," essentially means that all interpretive programs and services will also be accessible to the maximum extent feasible.

Interpretation is an integral part of the management and operation of the National Park Service. For disabled visitors to benefit from this vital area of public education on the use and enjoyment of our park resources, interpretive staff will need to utilize alternative methods and make modifications, where necessary, to improve access to their visitor programs and services. Specifically, this would mean that information delivered by auditory means is available for hearing-impaired visitors; that information provided visually is available to those visitors with visual impairments; that representative programs are available for mentally retarded visitors; and that information provided in areas which are not accessible to physically disabled visitors is provided, to the extent possible, in accessible locations.

This publication has been prepared to assist interpretive staff in identifying the programmatic needs of disabled park visitors and in making reasonable modifications to assure that they can participate. There are standards, guidelines, and many publications that address the issue of architectural access and give substantial guidance for compliance. However, very few resources address programmatic access. The intent of this publication is to provide that guidance to park interpretive staff. It is hoped that this information, some of which has been developed and condensed from the NPS Western Region's Special Populations Training Handbook, will provide park staff with the necessary resources to successfully implement accessible programs and services for disabled visitors.

Laws, Policy and Guidelines

The National Park Service has legal mandates and internal policy which require us to make our programs accessible to disabled visitors. Section 504 of the Rehabilitation Act of 1973, as amended in 1978, requires that "no otherwise qualified individual shall, solely by reason of his or her handicap, be denied the benefits of or participation in any program or activity funded or conducted by a Federal agency." Section 504 essentially means that any program or service provided to the general public must be made accessible to and usable by disabled individuals to the highest extent possible and feasible.

NPS policy (Special Directive 83-3: Accessibility for Disabled Persons) strongly supports this mandate. This policy directs that, to the extent possible and reasonable, all interpretive programs, recreational activities, concession operated and privately sponsored activities,

Museum and visitor center exhibits can be easily designed to be accessible to **all** visitors, including those who use wheelchairs. *(Homestead National Monument)*

publications, and any other information provided to the park visitor and/or employee shall be provided in such a way that disabled people can receive, as close as possible, the same benefits as the nondisabled person. This policy is based not only upon legislative mandates, but also upon the commitment of the NPS to provide access in our programs and facilities to the broad cross section of the visiting public. This policy also reflects our obligation to conserve and protect park resources and preserve the quality of the park experience for everyone.

The National Park Service also has guidelines to direct the implementation of its programs and services. Interpretation and Visitor Services Guidelines (NPS-6) establishes the conditions and actions that are prerequisites in the interpretation and visitor service program at each park. The Guidelines for Interpretive Services for Disabled Visitors in this publication are referenced and summarized in NPS-6 and have been developed by extensive input from NPS field interpreters and specialists in the area of serving disabled persons.

The Disability Movement in America

Many people wonder why we are experiencing the surge of concern for accessibility for disabled people in our nation today. Others wonder why the National Park Service is so actively involved when seemingly only a small number of disabled people utilize the parks. There are a number of reasons for this, but foremost is the fact that the number of disabled persons in the nation, and thus the number of potential park visitors who are disabled, is far greater than most would imagine.

Although the exact figure is not known due to differences in data collection methods, it is generally agreed that over 36 million Americans or over one-sixth of our population has some form of physical, mental, or sensory impairment which significantly limits one or more of those persons' major life activities. When we consider those who have less apparent disabling conditions such as cardiovascular or respiratory problems and the approximately 10 percent of the population over age 65 (many of whom may experience various degrees of disability), we are addressing access for some 42 percent of the general population. Hearing and visually impaired persons include those who are totally deaf or blind, and also the larger numbers of persons with seriously limited vision or hearing. Mobility impaired individuals are those with physical disabilities that involve significant difficulty in walking and generally require the use of a mobility aid such as leg braces, crutches, canes, wheelchairs or walkers. It can include, however, individuals with cardiac or respiratory problems whose ability to walk is significantly impaired but who do not normally utilize a mobility aid. Mentally impaired individuals include those who have a degree of mental retardation and who may have difficulty comprehending written or spoken information. It also includes those with learning disabilities and emotional impairments for whom reception or information processing, and therefore comprehension, may be difficult.

Recognition of the right of disabled persons to opportunities to participate in programs and receive services and the legislation mandating this action are not things that have occurred overnight. The disability movement and awareness of the rights of disabled persons have evolved over many decades culminating with legislation which seeks to ensure that disabled persons have the same opportunities as everyone else.

Since the turn of the century, the number of persons with disabilities has significantly increased due in large measure to advances in scientific and medical technology and in identification methods.

People are living longer resulting in a large increase in the number of elderly persons, many of whom have some disability. Infants who would not have survived 50 years ago are now being saved through medical science, although many may have a resulting disability. Medical/surgical techniques developed during the past few decades have enabled many people to survive previously fatal illnesses and injuries—often with a resulting disability. The advent of the auto and increased mobility of our citizens have resulted in accidents and personal injury which has further increased the number of persons with disabilities.

Until recently, disabled people were not very visible in the daily activities of our society. This was due in part to the essentially segregative nature of rehabilitation and education programs. However, in recent years a shift in the focus of these programs, coupled with

Interpretive programs designed to mainstream disabled visitors with non-disabled visitors expand everyone's experience. *(Fort Point National Historic Site)*

advances in technology, disabled people speaking out, and supporting legislation to eliminate physical and programmatic barriers, has resulted in a large increase in the numbers of disabled people actively seeking their rightful place in the activities of our society. This includes the activities within our national parks.

Indeed, we have seen a significant increase in the numbers of disabled visitors seeking to participate in everything from wilderness hiking to sunbathing at a seashore to touring a battlefield—in effect, seeking to share in our national treasures just like everyone else. This increase is due not only to the increased mobility and independence of disabled people, but also to the increased accessibility within the National Park System. As our parks and programs become more accessible, the number of disabled visitors has and will continue to increase.

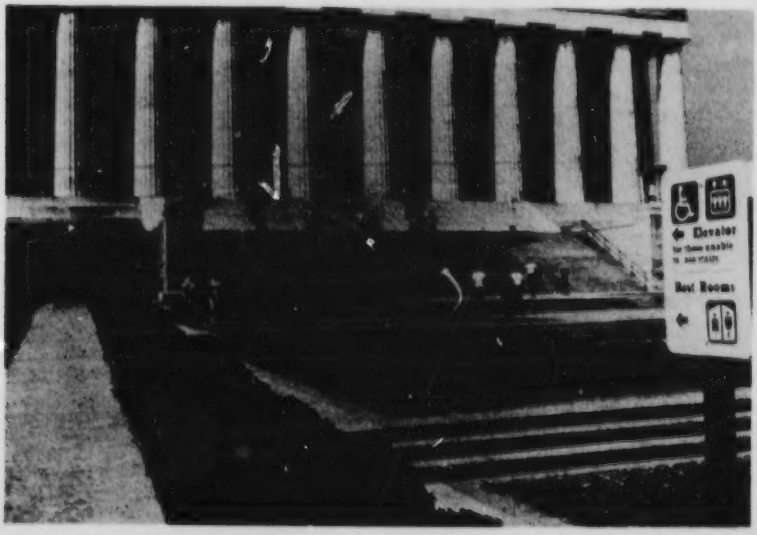
Advances in technology have also had an impact on the increase in numbers of disabled visitors. The availability of TDDs (Telecommunication Devices for the Deaf) at many park sites enables deaf/hearing impaired visitors to receive direct up-to-date information and assistance. New advances in captioning films and video tapes have given our park audio/visual programs new meaning for these visitors. Wheelchairs to be used for hiking have opened up new opportunities for park experiences previously closed to persons with mobility impairments. Opportunities for independent exploration are given to blind and visually impaired visitors through the development and use of audio description tapes.

Over the past couple of decades, new worlds and opportunities have indeed opened to disabled citizens. These opportunities certainly include park and recreation experiences, especially opportunities to participate in and enjoy our nation's national parks.

Methods, Techniques and Assumptions

Program accessibility can be accomplished in a variety of ways in keeping with the intent of Section 504. Modifying programs may involve the rewriting of a brochure or other informational materials in larger type and in clearer language or providing audio cassettes in conjunction with some interpretive programs to benefit visually impaired and blind visitors; or, in the case of hearing-impaired and deaf visitors, using sign language interpreters, captioned films or printed transcripts; or to benefit physically disabled visitors, simply relocating a program to a more physically accessible area.

The guidelines in this publication have been designed to offer park staff a range of alternatives to consider in making needed modifications to programs and services. However, in each case, careful consideration needs to be given to the broad spectrum of disability needs and available options so that a modified program or service reflects the most effective method for reaching the greatest number of visitors and the most effective use of available resources. It does not mean that all criteria for each type of program within the guidelines will be applicable in every instance; or that **every** interpretive program must be made **equally**



Accurate and well-publicized notices of available services are critical to disabled visitors. *(Lincoln Memorial)*

accessible to disabled visitors at the same time. For example, it may not be feasible to have sign language interpreters for hearing-impaired or deaf visitors at every personally conducted program offered in a park. However, if there is a member of the staff capable of signing, then that individual could be made available upon request and the provision of this service advertized. Similarly, to reasonably accommodate blind visitors in a particular program, the staff may consider audio versus braille. Once you consider that only 10 percent of the blind population read braille and that none of the non-blind public can use it, choosing **audio** as an alternative method becomes the most effective program adaptation. Both blind **and** visually impaired individuals as well as the general public can benefit by that choice.

Recognizing that assessment and evaluation of each park's interpretive program will reveal that all guideline criteria for each type of program will not be applicable in every instance, these guidelines have been organized to allow flexibility in modification of interpretive and visitor services. This flexibility also recognizes that program adjustments/improvements will require choices due to specific and unique situations, fiscal limitations, and the need to properly allocate limited staffing and funds to provide the most effective service possible. In many cases, very minor modifications are needed. Priorities for program adjustments will be reviewed periodically in light of interpretive objectives of the park and the changing visitor use needs.

Integrated Programs

Accommodating disabled visitors does **not** imply segregating programs or services for a "special visiting public." The Park Service is not promoting the concept of "segregated programs and services" for disabled visitors, but instead is supporting the effort to mainstream disabled visitors with nondisabled visitors in the most integrated setting as is possible. Many of our existing interpretive programs and services can benefit by this approach. Interpretive programs designed to provide for different levels of visitor participation expand everyone's experience in our national parks.

However, there are some situations where access solutions are not immediately available and, in these cases, partial accessibility to a program or service is better than none. Section 504 discourages, but does not prohibit, separate programs and activities for disabled persons; however, separate aids, benefits, or services should **only** be

considered if they are "the only means possible" to provide visitors with program opportunities which are otherwise not accessible. For example, for a mobility impaired visitor, the inability to enter or move freely through an historic building becomes the barrier to that individual's access to the interpretive program or service. Steep stairs to mezzanine exhibits make the exhibits inaccessible to people in wheelchairs or to those with mobility problems. In such a case, one option for program accessibility would be physical modification of the structure. However, this option is not feasible when the physical modifications necessary to facilitate program access would involve substantial physical changes to the historic fabric of the structure

Given the requirements of historic preservation, park managers have an important task of assessing the value and condition of each historic structure to arrive at suitable options for physical accommodation. Correspondingly, the park interpretive staff needs to carefully review the program **itself** to find ways to provide a disabled visitor with as close to the same interpretive opportunities as is provided to nondisabled visitors. A priority should be direct participation in the interpretive program and some degree of physical access to an historic site and its properties. There are various administrative or interpretive methods to accomplish this. For example, visitor traffic could be rerouted or the interpretive tour could begin at another entrance which has a ramp or is located at ground level. Structures which are accessible **only** on the first level could use audio-visual devices to bring the inaccessible areas and information on the structure within reach of disabled visitors located on the first floor. On-site accommodation is always preferable because the disabled visitor remains integrated with other visitors. However, if the structure is not physically accessible and alterations would destroy its historic integrity, the interpretive staff still has the responsibility to seek program alternatives which will provide the visitor with some form of interpretive experience of the historic facility/site/area.

Only in this instance and after all other options have been explored, should a **special program** be considered, such as a video tape or slide program of the facility and routine tour. This program could be made available at another physically accessible location in the park. This option has the benefit that it can be made available to all visitors should the structure or site become off-limits or closed temporarily for repair work.

Stan Cofield, NPS interpreter who is visually impaired, stands beneath an information sign which contains accessibility information. *(John F. Kennedy Center for the Performing Arts)*

Avoiding Assumptions on "Capability" Based on Disability

A disabled individual's opportunity to participate in an activity should not be denied based upon our **own** assumptions of what a disabled person can or cannot do. For example, there are numerous examples of individuals with various disabilities who participate in almost any kind of activity provided, despite the difficulties of the terrain, whether it be at a seashore or mountaintop in pursuit of the natural flora and fauna, or at an archeological site in pursuit of first-hand experience and knowledge. The disabled visitor should be approached just as any other participant. Communication with all visitors should emphasize the **requirements of the activity** so that the individual visitor, whether disabled or not, can determine his/her own ability to participate. Such an approach avoids the problem of making a generalized judgment on the extent to which a particular disability would render the visitor unable to participate and also alerts other visitors to the difficulty or potential risks of the program.

Section II
Guidelines and Resources for Interpretive Services for Disabled Visitors

The guidelines which follow have been developed with extensive input from NPS field interpreters and specialists in the area of serving disabled people. These guidelines should not be viewed as prescriptions or strict standards but instead as guidelines which can help to point us in the right direction to achieve programmatic access for disabled visitors. The choice as to which modification(s) will prove most applicable to any particular interpretive operation remains the responsibility of the park interpretive staff.

The guidelines, which are arranged by disability group, are preceded by general characteristics of the disability to provide park staff with a background with which to develop an awareness of disabilities and identify implications for interpretive planning. Following the guidelines are tips which are designed to assist park staff in working and interacting with disabled visitors. Several pages of resource material which will provide assistance in planning are also included. In some instances, representative commercial products or systems may be included in the resource material. Their inclusion should not be seen as an endorsement of any particular item, but rather a representative example.

It is important to emphasize that new technologies and approaches to accessibility will continue to improve and change over time, and park interpretive staff should be flexible and receptive to these changes in their approach to improving interpretation and visitor services.

Dennis Almasy, Yosemite Access Coordinator, chats with a visitor at Mirror Lake. *(Yosemite National Park)*

Mobility Impairments

General Characteristics

A mobility impairment curtails the ability of movement or ambulation. Persons with mobility impairments may require the use of a wheelchair, crutches or cane, may walk with difficulty, lack coordination or not have full use of their arms or hands. Congenital impairments, accidents, and illness as well as the normal process of aging can all leave parts of our bodies in different stages of weakness, paralysis, or absence.

Some environmental concerns of persons using wheelchairs include: the presence of steps, slippery surfaces, maneuvering through narrow spaces, going up and down steep paths, moving over unsmooth surfaces, making use of conventional restroom and water facilities, reaching and viewing things placed at conventional heights.

People who have difficulty in walking may (or may not) walk with aids such as crutches, a cane, a walker, braces, artificial limbs, or even holding onto a friend's arm. Reduced agility, speed of movement, difficulty in balance, reduced endurance, or even a combination of these may contribute to impaired mobility. Often energy reserves are used faster than average, as a person who walks with difficulty may be required to spend it in trying to keep their balance or otherwise meet challenges of the environment as it confronts their limitations.

Some environmental elements of concern to people with walking difficulties include steps or steep slopes, uneven walking surfaces, walks interrupted with raised or uneven expansion joints, slippery surfaces such as highly polished floors or wet shower rooms, walks filled with debris, areas that collect standing water, sand, and/or ice, etc. Having to stand or walk for extended periods of time also presents a problem for many people.

Persons with upper limb impairments (e.g. limited use of their arms or hands) are handicapped by those aspects of the environment which require use of these extremities. Environmental concerns of people with upper limb impairments include styles of knobs, buttons, dispensary devices, handles to operate doors, drinking fountains, coin operated machines, telephones, elevator controls, and the weight of

exterior doors. Persons with upper limb impairments may also have some difficulty with balance, especially when climbing stairs, or walking up inclines.

Many persons with impaired mobility also lack the ability to control their body temperature to meet external demands. For example, in hot weather, these persons may not be able to perspire freely, and thus may suffer heat stroke at a relatively low temperature. In some conditions, pain and/or muscle and joint flexibility may be affected by cold and dampness. Many physically impaired persons must significantly increase their daily intake of liquid, making accessible water facilities and restrooms a critical need.

Many persons have multiple health problems which may include cardiovascular and cardiopulmonary diseases, hypertension and degenerative conditions of aging. These persons may also have less than average agility, stamina, and slower reaction time.

The National Center for Health Statistics published statistics (1980) relating to the number of mobility impaired people who make use of mechanical aids. These figures are as follows:

Wheelchair	.6 million
Crutches	.6 million
Canes	2.7 million
Walkers	.7 million
Braces	1.4 million
Artificial Limbs	.2 million
Special Shoes	1.5 million

It is important to note that these statistics are significantly increased when the number of people who are temporarily disabled (i.e., broken leg) is considered.

General:

Personal and non-personal services should be located in physically accessible locations. When and where this is not feasible, programs and services should be provided in some form at alternate locations which are accessible (e.g. audio-visual devices can be made available which will bring inaccessible programs within reach of mobility impaired visitors). Inpretive tours, talks, and demonstrations given in inaccessible locations could be filmed, taped or video recorded and shown on request at accessible locations.

Basic accessibility information on the site, its facilities and programs shall be provided. Park staff should be familiar with how to provide safe assistance if needed to visitors who may be using wheelchairs.

Information Stations:

Information stations (entrance station, visitor center, campground office, point and rove duty) should be operated from physically accessible locations. Where this is not possible or practical, pertinent park information should be available in accessible alternate locations. Information on all accessible facilities and programs for disabled individuals shall be available and the International Symbol of Access should be displayed at all stations providing accessibility information.

Signs, Labels, Exhibits:

Signs, labels and exhibits should be designed to be accessible to persons in wheelchairs and with mobility impairments. Allowances need to be made for approaching the exhibit and viewing the exhibit from a wheelchair. A maximum and minimum reading height of 65″ to 54″ respectively will allow persons both standing and sitting to easily read the material presented. For persons

Wayside exhibits should be designed and positioned so as to be accessible to wheelchair users and others with mobility impairments. *(Rocky Mountain National Park)*

using wheelchairs, the bottom surface of a horizontal exhibit (e.g. models, relief maps, display tables) should be a minimum 30″ from the ground level to allow for a frontal approach. The range of eye level viewing from a wheelchair is approximately 43″ to 51″ from ground level. The height of a horizontal **top** surface should be designed to be viewed from an average eye level height of 48″. The height of a horizontal display should also be determined by the desired angle at which objects are to be viewed from that eye level. Items to be manipulated on exhibits (e.g. activating buttons, turnknobs, etc.) should be mounted at a maximum height of 54″ allowing a side approach and a maximum height of 48″ allowing a frontal approach. Objects to be handled such as books, publications, artifacts, relief maps, and tactile exhibits should be placed at a maximum height of 48″ and a minimum height of 9″ from ground level and within a 24″ reach (see Range of Forward/Side Reach Dimensions).

Personal Services:

Living history programs, conducted tours, and interpretive talks should be scheduled at locations which provide accessible parking areas and, when possible, accessible support facilities (restrooms and water supply). There should be an accessible path of travel from parking areas to the seating areas. Interpreters should be aware of **pace** in a conducted walk which includes wheelchair using visitors. The interpreter should physically locate himself/herself next to the disabled visitor(s) in a group to assure visual/auditory access to the interpretive message. Mobility disabled visitors usually arrive at a resource or interpretive stop last and tend to stay about the outer periphery of the group of visitors clustered around the interpreter. Transportation (tour buses, trams, boats, etc.), when used as part of a conducted interpretive program should be accessible to persons using wheelchairs. When this is not feasible, alternative means of transportation should be allowed or provided.

Audio-Visual Programs:

When physical access to movie, slide, or video programs is impossible, **alternative** viewing areas which are accessible should be provided. Photographic albums with accompanying text may be developed for inaccessible historic structures and provided on request to the visitor at an accessible location. Please note that these alternative solutions should be viewed as interim solutions or used only when every attempt to create physical access to the resource has been exhausted.

Self-guiding Programs:

A self-guiding tour (SGT) should be designed to be accessible. Though proper use of trail design and media availability, the SGT will allow mobility impaired persons to experience the trail and connecting resources to their fullest degree.

Interpretive Trails:

Interpretive trails designed for accessibility should have a hard or hard-packed surface which will allow for the easy passage of wheelchairs, as well as a minimum width of 48". Any extended grade should not exceed 8.3° (1-foot rise/12- foot run) with shorter grades not exceeding 10°. Printed or sign information should relate the trail length, travel time, degree of difficulty, list facilities provided along the trail, and suggest any special precautions or preparations which may be needed. Sign height should be appropriate for readability from a wheelchair. On longer trails (1 mile or 1 hour) sheltered rest areas should be developed. These rest areas should include benches having back and arm rests and, where feasible, accessible restrooms and water facilities. On longer trails, shorter cut-off loops should be provided. SGT brochures should be dispensed from containers which are easily reached and usable. Any barriers or walls needed along the trail should be low enough to allow persons in wheelchairs to view over the top of them.

Involving Visitors with Mobility Impairments

A. Logistics

Review your program site and tour route. Make modifications in your tour as required to accommodate visitors who are unable to climb stairs, walk long distances, need wider doors to allow their wheelchair passage, etc.

Review your site and tour route and plan where the group can take rest stops; locate accessible fountains and restrooms. It may be necessary to reroute your hike or choose another trail.

Plan your tour route to include shelter from weather. Many mobility impaired persons are unable to automatically adjust their body temperature to meet external demands. Lacking the ability to perspire freely, some people may suffer heat stroke at a relatively low temperature if constantly exposed to the sun. Similarly, cold and dampness may affect muscle and joint flexibility, limiting the length of enjoyment and the distance a person may be able to travel comfortably. Keep your eyes open for signs of participant discomfort.

Rough terrain may aggravate painful conditions, especially for some wheelchair users. Rough terrain may also present tripping hazards to some people who use braces and artificial limbs. Review your site and trail with this in mind, then adjust your approach, the distance that you expect to travel, and your speed of travel.

It is best to select tour and walking routes that are easily traversed, that do not offer tripping hazards or a great expenditure of energy, and also provide a firm steadfast surface. This does not mean that the only place to take a group for a walk is in the parking lot. Many fire roads and trails that are hard-packed are usable.

B. Program Considerations

Remember that each of us participate at our own pace. Allow members of your group to move at their own pace. Keep the group together as much as possible. Otherwise, the slower group members

will never get a chance to rest or to hear what is happening with the faster members.

Allow participants to participate in all activities that you offer to the group. Let individuals make their own decision of what they can or cannot do. Disabled people are usually quite aware of their own abilities, capabilities, and possible limitations.

Make sure your programs offer opportunity for success, new experiences, and challenges for every participant.

While leading a program, tour or hike, allow opportunities for frequent rest stops, including water, restrooms, and refreshments.

When stopping to rest, don't just announce that "this is a rest stop;" find something interesting to do during the time.

Do not rule out activities for the group. Look at all the possible approaches and alternatives.

As our parks become more accessible, an increasing number of disabled persons are engaging in a wider range of activities. *(Cabrillo National Monument)*

C. Personal Services

Offer assistance if you wish, but do not insist if your assistance is declined—sometimes it really isn't necessary. In some situations, assistance may be a nindrance or actually unsafe (e.g., if you suddenly grab a wheelchair, you may cause the person using it to lose their balance). If your assistance is accepted, ask the individual exactly how you can help.

Don't lean or automatically hold onto a person's wheelchair. It is part of the person's body space and should be respected as such.

Talk directly to the person with a disability, not to a third party.

Don't be sensitive about using words like "walking" or 'running" with people using wheelchairs. They use the same words.

Do not remove someone's crutches, cane or walker the moment they sit down. The individual will be more independent and may feel more secure if they do not have to ask for their crutches to be returned before they can move on to the next spot.

Some participan's who use a wheelchair may have found a safer method to go down a curb or a steep incline. Ask them first—not everyone goes "by the book." Review the handling and safety tips of working with a wheelchair.

Remember the participant's disability is not contagious. People with mobility impairments are not sick.

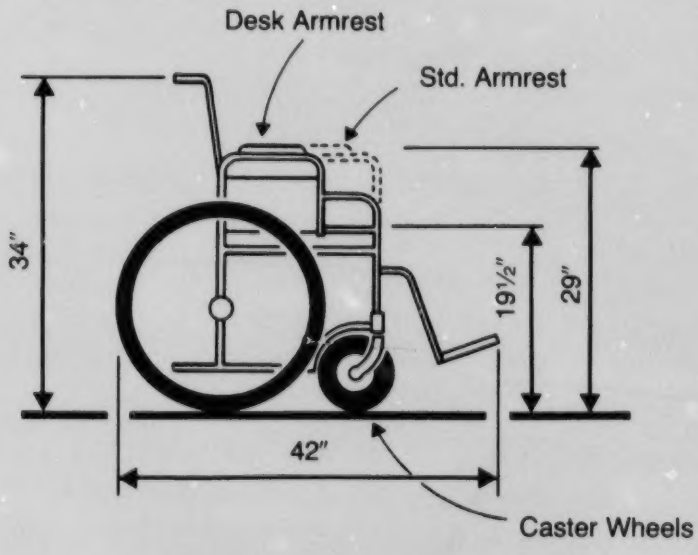
Don't be afraid of participants and their equipment. The equipment, even though some of it may look as if it came from NASA (perhaps some of it did), is simply to improve mobility, safety, and independence of the user.

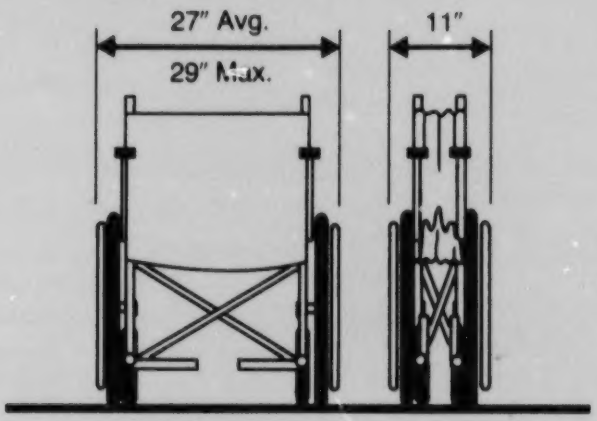
Wheelchair Dimensions

1) Wheelchair specifications: The most common type of wheelchair used by non-ambulant persons outdoors is the collapsible tubular metal chair with plastic or nylon upholstery for seats and backs. To suit needs of various disabilities these are available with numerous attachments and removable parts such as leg rests, arm rests, tilt up leg rests, tilting back rests, etc. The standard basic chair is illustrated on this page.

Turning Radii of Wheelchair

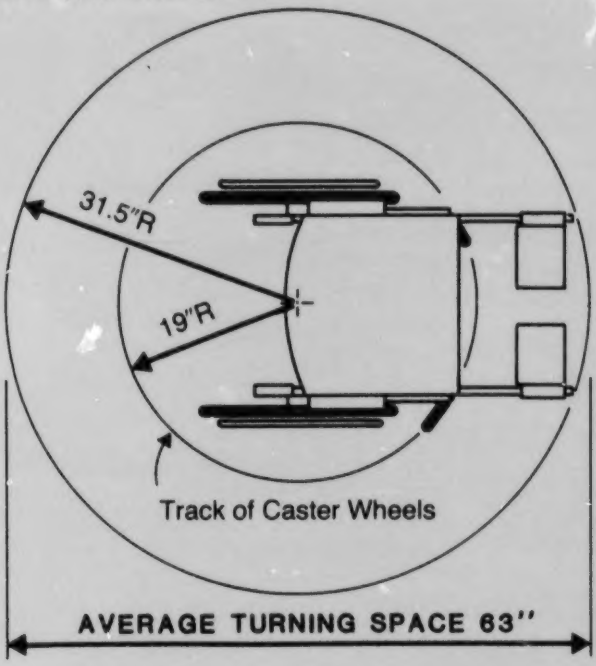
2) Fixed turning radius of wheelchairs:
(a) The fixed turning radius of wheelchairs, wheel to wheel, when pivoting on a spot is 18", i.e. distance from pivot spot to track of caster wheel.The turning radius of wheelchairs from pivot point at center of chair to foremost projection of the footrests is approximately 31.5".





Pivot Point at Center

Usual turning method—moving one wheel forward and the other backward to pivot about center.



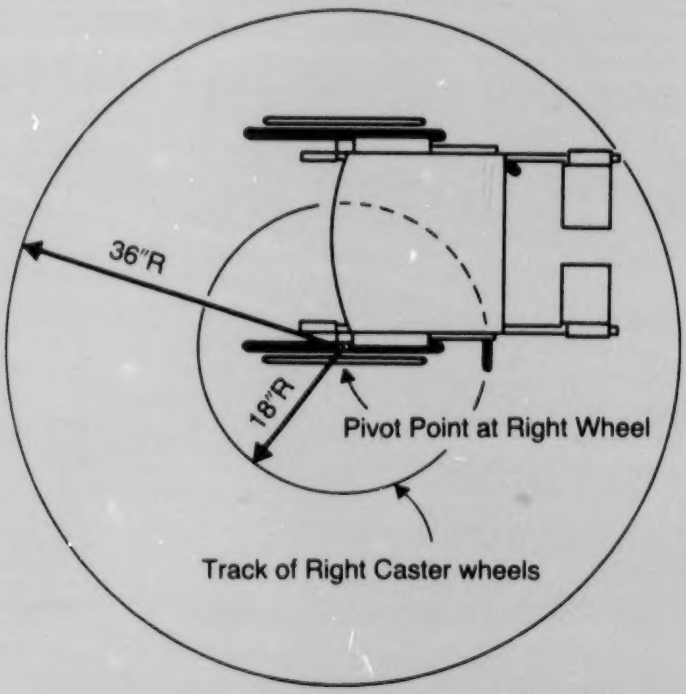
1632

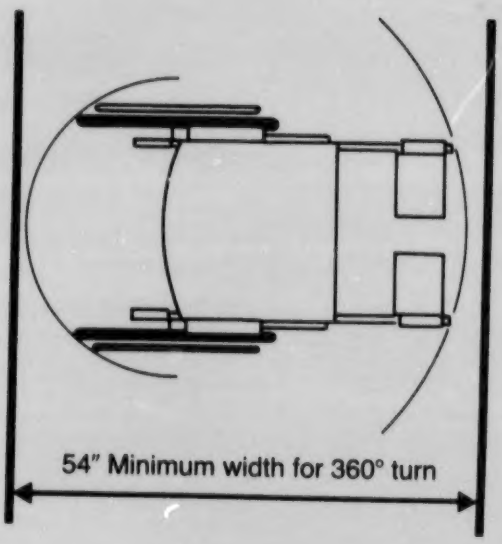
(b) The fixed turning radius from pivot point at right rear wheel to left front footrest, or from left rear wheel pivot point to right front footrest, is 36". The average turning space required is 63" × 63".

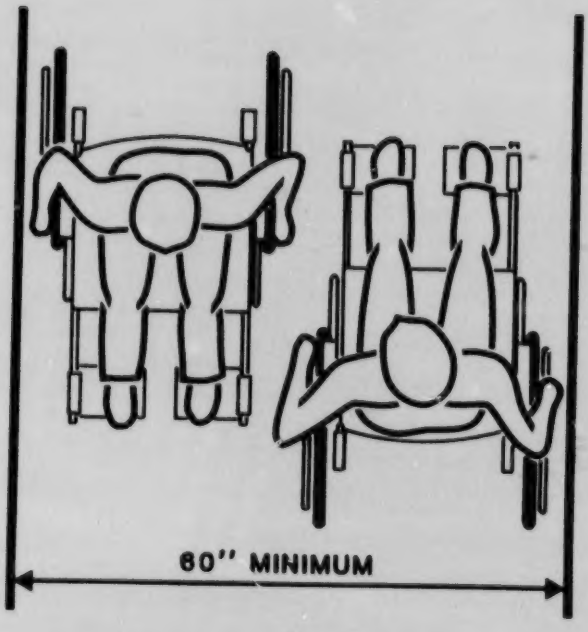
(c) A minimum width of 60" is required for two individuals in wheelchairs to pass each other.

Pivot Point at One Wheel

Alternate turning method—locking one wheel and turning the other.



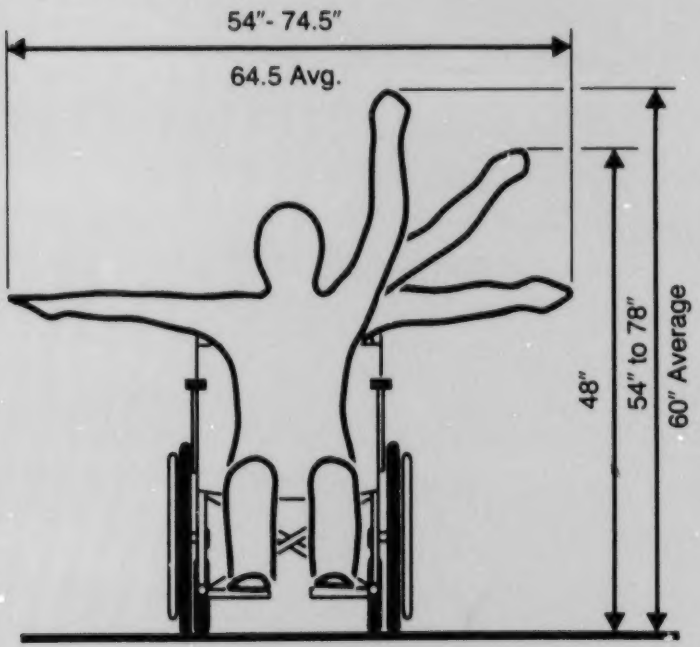

54" Minimum width for 360° turn


60" MINIMUM

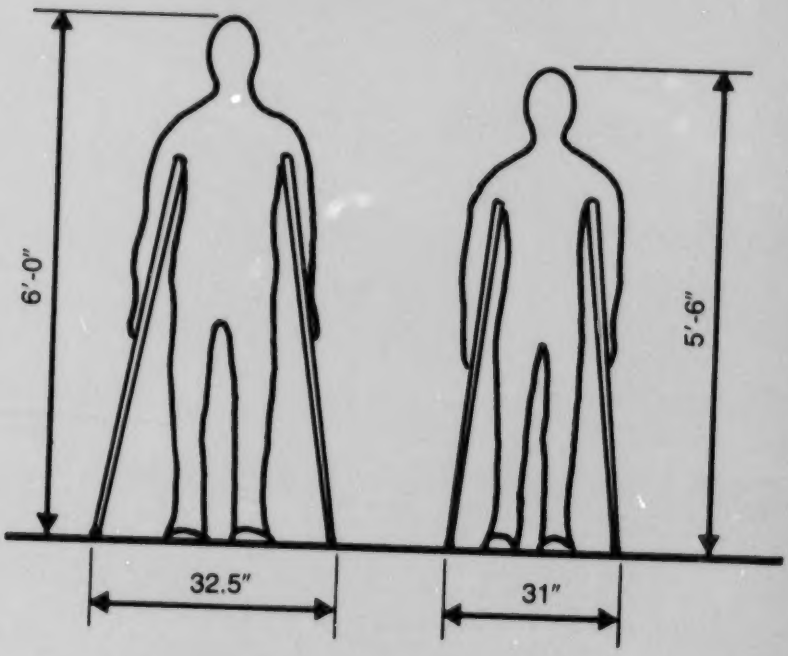
3) The individual functioning in a wheelchair:
(a) The average unilateral vertical reach is 60".
(b) The average horizontal working reach is 30.8".
(c) The bilateral horizontal reach (both arms extended to side shoulder high) averages 64.5".
(d) The diagonal reach, as for wall mounted phone, is 48" from the floor.

4) The individual functioning on crutches and walkers:
(a) Individuals 5'-6" tall require 31" between crutch tips.
(b) Individuals 6'-0" tall require 32.5" between crutch tips.

(Source: Ronald L. Mace, *Accessibility Modifications*, Barrier Free Environments, Inc., Raleigh, N.C., 1976)



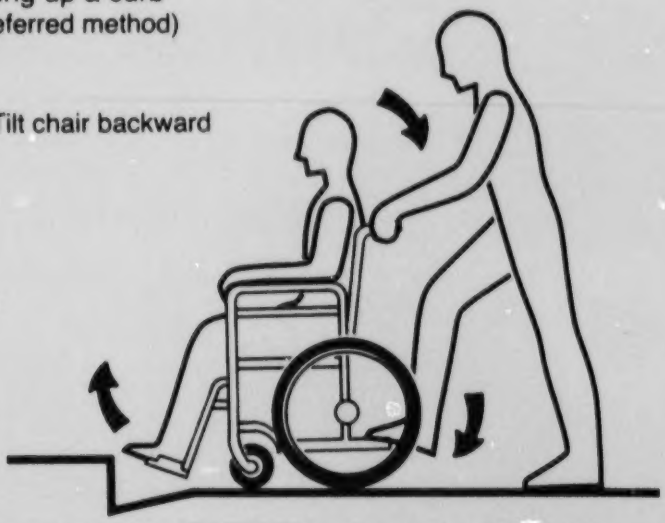
28"-33"
30.8" Avg.


6'-0"
5'-6"
32.5"
31"

Techniques For Assisting A Wheelchair User

Going up a curb
(preferred method)

1. Tilt chair backward



- Place foot on tipping lever and apply a pushing force. At the same time pull back and down on push handles. Pull back until chair is balanced and can be moved on its rear wheels.

2. Move forward to curb

- With chair tilted move forward to curb and lower front of chair on the curb and move in as close as possible before lifting.

3. Lifting onto curb

- LEAN forward, and lift-roll the chair up over the curb without having to step forward. (The assistant uses good body mechanics—bend your knees while keeping your back straight.)

4. On the sidewalk

- Observe other pedestrian traffic

To go down a curb reverse steps 4,3,2,1

Going up a curb
(alternate method)

Not a recommended procedure when sidewalk is wet.

Requires above average strength

1. Approaching curb

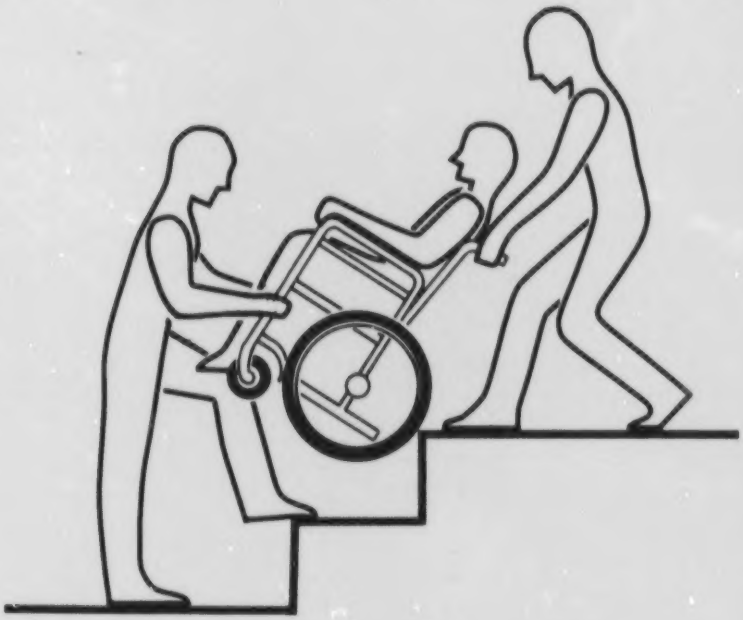
• Assistant steps backward onto sidewalk and pulls wheelchair backward until wheels are in contact with curb. (Be sure of firm footing.)

2. Pulling up curb

• Tilt chair backward and lift-roll o er the curb. (Bend knees and keep body straight).

How to do steps—

1. Tilt wheelchair backward.
2. Assistant in front should have firm grasp on the wheelchair and should be standing with a good base of support.
3. Lower or raise wheelchair one step at a time by letting the large wheels roll over edge.
4. After each step, each assistant should reposition themselves before repeating procedures.



• When assisting anyone in a wheelchair, the assistants should bend their knees and keep their backs straight. This will allow assistants to use their leg strength for lifting and pulling.

(Source: *Accessible Bus Transportation,* Rehabilitation Research & Training Center No. 9, George Washington University, 1980.)

Signs and exhibits with braille are very beneficial to blind visitors trained in its use. *(Yellowstone National Park)*

Visual Impairments

General Characteristics

About 1,300,000 of the U.S. population have severe visual impairments. Of this total, 39 percent are "legally blind" and 10 percent are "totally blind." **Most** persons who are visually impaired do have **some** vision even if they are "legally blind." Someone who is legally blind is defined as having measured vision of 20/200 in their better eye with correction. This means that they are able to see at 20 feet what a normally sighted person is able to see at 200 feet. The term "totally blind" refers to the total absence of vision and light perception.

There are many kinds of visual impairments, each with a wide range of disability and limitation. A person described as legally blind may be able to read large print and ambulate without mobility aids in many or all situations. They may also be able to perceive light and darkness and perhaps even some colors. On the other hand, someone else who may also be legally blind may not have any of these skills. There are also some conditions in which the individual's vision may be better one day over another, depending on fatigue and other factors.

It is impossible to generalize visual impairments into one problem with one solution. People who have lost their sight later in life, may retain visual memory—concept of space, color, etc. However, people with congenital visual impairments (impairments present at birth) may have a different frame of reference for these same elements. Similarly, people with congenital visual impairments may have skills in reading braille and using tactile aids which may be more useful to them than to people who have later lost their sight.

The process of aging also affects our visual perception. Both visual acuity and opacity are affected. Visual acuity influences how we perceive objects at a distance, and opacity of the lens determines the way light is transmitted, affecting perception of colors and textures. Generally, elderly people perceive almost 20 percent less keenly than those with normal vision. Colors often blend together, and closely related textures cannot be discerned.

Glare is a major problem for many people, particularly the elderly. Do not confuse the term "glare" with "light level." Low light levels cast

heavy shadows, making it difficult for many low vision people to perceive hazards such as stairs, changes in floor surface, etc. Glare usually results when too much light bounces off light colored walls and floors, making it difficult and uncomfortable to navigate a long corridor or around a room.

Some environmental elements of concern to visually impaired persons include: maneuvering past obstacles placed in the path of travel, going up or down steps, reading signs or printed materials, understanding exhibits that require visual perception, etc.

It is important to remember that many blind or visually impaired persons do **not** read braille. In fact less than 10 percent of the people who are blind or who have severe visual impairments are able to use this system. Many persons choose to receive information by audio cassettes, large print or through oral presentations.

This is not to say braille should not be provided. People who use braille appreciate its availability. However, this should not be the only method available to present information to blind or visually impaired visitors.

General:

For blind or visually impaired persons, essential information provided in print, either interpretive (such as self-guiding tour brochures, exhibit signs and labels, printed texts) or orientational (such as park brochures, orientation signs and directions), should be available through the spoken word, audio tapes, large print, and, if possible, braille.

Information provided for blind individuals should be highly descriptive, providing in language all the relevant information normally acquired through sight (e.g. directional cues and sensory description. When preparing information for transcripts and/or tapes, consult with local blind organizations. Test such materials on-site before distribution to the visiting public.

Personal Services:

Park interpreters should be familiar with the Sighted-guide Method in order to provide a blind visitor with orientational/directional assistance (refer to "Sighted Guide Techniques". An effective oral delivery of an interpretive program avoids the passive voice, imbedded clauses, and split infinitives. Artifacts, displays, and other significant landmarks requiring visual appreciation should be concretely described. In addition to oral communication, items that can be touched should be incorporated into the program.

Self-guiding Programs:

Self-guiding program materials should include such information as trail length, trail conditions, possible hazards and cues for proper orientation. Cassettes developed for blind or visually impaired visitors should be tested at the site by blind consultants prior to visitor distribution.

Where appropriate, non-visual cues should be used to inform and direct blind persons to signs, tapes, and exhibits. Studies have demonstrated that 4" wide tactile guidestrips can be easily located and used by blind persons. Differing textures, audio cues, or taped messages may all be used to help locate the interpretive message. Contrasting trail and walkway surfaces, both inside and outside, can be used to direct movements of blind and visually impaired individuals. Care must be taken to make sure that textural changes do not interfere with mobility for people using wheelchairs. In general, taped messages in addition to the interpretive information should provide orientation directions, safety warnings, mobility clues, and any additional sounds or information which will enhance the interpretive experience.

Exhibits Signs/ Labels Publications:

Every effort should be made to develop touch areas within existing exhibits or display areas. The use of 3-D relief maps, models, and actual objects will provide the blind individual with the concrete information needed to better understand the interpretive message.

For visually impaired persons, additional accessibility may be provided through the use of large print materials or routed/raised signs. Large print materials must be at least 18 point (¼"). Signs using raised Arabic characters can be read by sighted, partially sighted, and blind persons. Letters should be a minimum of ⅝" (16mm) high, but no higher than 2" (50mm) and raised at least 1/32 (0.8mm) off the background to be legible to blind or partially sighted persons. Symbols or pictographs on signs should be raised at least 1/32" (0.8mm). Greatest readability is achieved through the use of dark-colored characters or symbols on a light background.

The use of audio cassette systems is one method to make self-guiding programs accessible to visitors who are blind. *(Grand Teton National Park)*

Straight lettering without script is recommended for both information and directional signs. These signs should be placed no more than 30" from the closest approach and free of obstructing branches and buildings.

Exhibit visibility may be enhanced through the use of adequate and even lighting, high contrast colors or photographs and non-glare glass. Items should be displayed against clearly contrasting colors. Another aid to visibility is the insertion of magnified viewing panels in the glass or framing around the exhibit. In some instances enlarged photographs showing details of paintings, artifacts and architectural elements can be of great benefit.

Exhibit labels should reflect the following guidelines:

Size of Type	*Viewing Distance*
¼-½"	4'
⅝"	6'
2½"	30'
4"	60'

Exhibit labels should be designed for maximum contrast (dark on light background or vice versa) with adequate illumination.

Involving Visitors with Visual Impairments

A. Logistics

Identify areas and items in your park site that participants can enter and operate equipment or touch artifacts and exhibits.

Review your trails or tour route. Remember that visually impaired persons do not have to be "wrapped in cotton" and led down paved roads. However, be aware of such hazards as steep inclines, chuck holes, fallen or over-hanging limbs, etc., and warn the group as you approach.

B. Program Considerations

Plan activities that include several senses (i.e., touch, taste, sound, smell).

Review the route of an interpretive trail and plan to describe stations or points of interest with descriptive adjectives. For example:

> The hillside on your right is a rocky hillside and is covered with tall dry thistle plants."

as opposed to:

> "This hillside is covered with dry weeds."

When leading a tour, keep the group together and do not start talking until you have everyone's attention.

Describe the areas you will be traveling through as you go from one station to another. Identify special sounds, smells, or sensations they may notice as participants are traveling. Do not conduct your tour as participants are traveling; most of their energy will be spent in concentration of their own movement to avoid tripping hazards.

Work with your curatorial staff and identify objects and artifacts that can be handled and how they can be touched. Some objects should not be handled at all, some only with limited handling. Some items can be handled if they are protected from fingerprints and grease stains with thin white gloves. Remember that verbal descriptions alone, no matter how good, seriously limit experiences by visually impaired visitors.

Avoid setting up exhibits or park areas just for one certain group of people, such as "Braille Trails." This assumes that disabled people need the protection of the special features, that there is nothing else in your site they would find interesting, and that there is nothing in the selected area of value to the general public. Another problem with these areas is that we are requiring visitors to identify themselves as being different from the rest of our visitors.

Prepare large models of small or fragile exhibit pieces. Do not include too much detail. The individual is just getting an understanding of the general shape of the item. Try to include some sort of scale, so the person has an idea of the relative size of the original object.

Prepare cassette tapes of interpretive trails that are self-guiding. Include a tactile or audio signal along the walk for identification of each interpretive station.

Cassette players equipped with headphones and rewind capability should be available for loan. The headphones will allow private listening without intruding on the "audio space" of other visitors. Rewind capability allows a person to repeat a message if they wish.

If you are demonstrating a skill, allow the visually impaired person to hold your hands as you work. Explain clearly and in concrete terms what you are doing as you do it.

If you are demonstrating machinery such as a large printing press, allow participants to feel the vibrations as the device is operated. Be alert to safety hazards and warn the participants of those hazards.

If you distribute printed materials, describe what is on the materials for those who materials for those who are unable to read it at the time you distribute it.

For the benefit of visually impaired visitors in your group, give clear verbal directions when moving from one area to another. "We are going to turn right and go down a flight of 10 stairs to the living room area" is more helpful than "Follow me to the living room area."

Do not make assumptions about what visually impaired visitors would like or are capable of doing. Many people who are blind are denied opportunities for experiences such as scenic overlooks merely because someone assumed "they wouldn't get much from the experience." With appropriate description, a blind person could enjoy a scenic overlook just as much as a sighted person.

Tactile models enhance interpretive programs for visually impaired visitors. *(Oxon Hill Farm, NCR-East)*

C. Personal Services

When approaching an individual or group of visually impaired visitors, introduce yourself and identify yourself as a National Park Service employee.

It is appropriate to lightly touch the arm of a person who is blind **after** you speak so that person knows you are addressing him/her.

Many individuals who are blind use guide dogs as a mobility aid and it is tempting to pet or attempt to play with a working guide dog. However, distracting a guide dog from its work can put its owner in danger. Under no circumstances should you pet or otherwise distract the dog without the owner's permission. Similarly, the owner may appreciate the offer of water for the dog, but this also should only be done with the owner's permission.

Offer assistance if it seems necessary, but don't insist if your offer is declined. If your offer is accepted, ask the person to explain how you should help.

Look at and speak directly to the blind or visually impaired person, not through a third person. Don't shout — use a normal tone and speed of voice.

Don't avoid using words like "see," "look," or "blind." Visually impaired individuals use the same words.

When giving directions to a blind or visually impaired person, be as clear and specific as possible. Point out things that may be passed which may serve as orientation cues. Be sure to point out obstacles in the direct path of travel.

When guiding someone who is blind, offer **your** arm. Grabbing a blind person's arm to lead them is dangerous as well as frightening and even insulting. The blind person will walk about a half step behind you, following your motions. Be sure to identify steps, curbs, or obstacles which may be encountered.

Sighted Guide Techniques

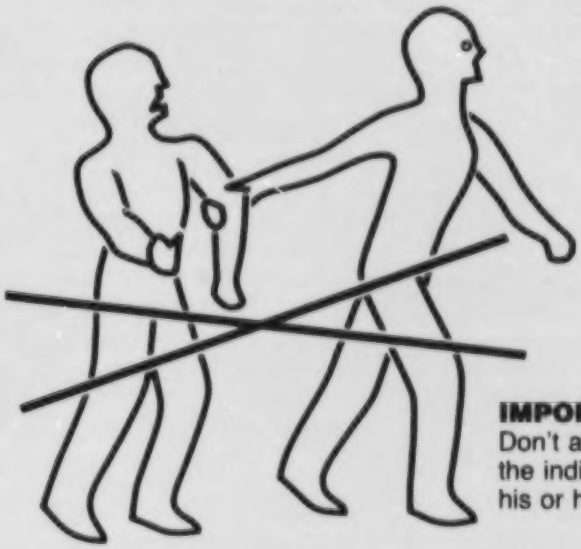
(From "You Too Can Be a Seeing Dog" by Ray Bloomer)

Sighted guide is a method in which a sighted person assists someone who is blind or visually impaired. They may use it when in unfamiliar surroundings or for recent loss of sight. Many folks shy from assisting a blind person because they don't know how. By learning this method, you can assist a blind individual comfortably.

Always make the initial contact with a blind person. They are probably unfamiliar with the park area, like most visitors. Identify yourself as "ranger," or member of the park staff.

If you have previously met the person, don't make them guess who you are. Tell them your name. The guessing game can be very frustrating and humiliating.

Don't insist on assisting if the blind individual declines an offer. They may know the park very well.



IMPORTANT
Don't attempt to lead the individual by taking his or her arm!

How to Use the Sighted Guide Method

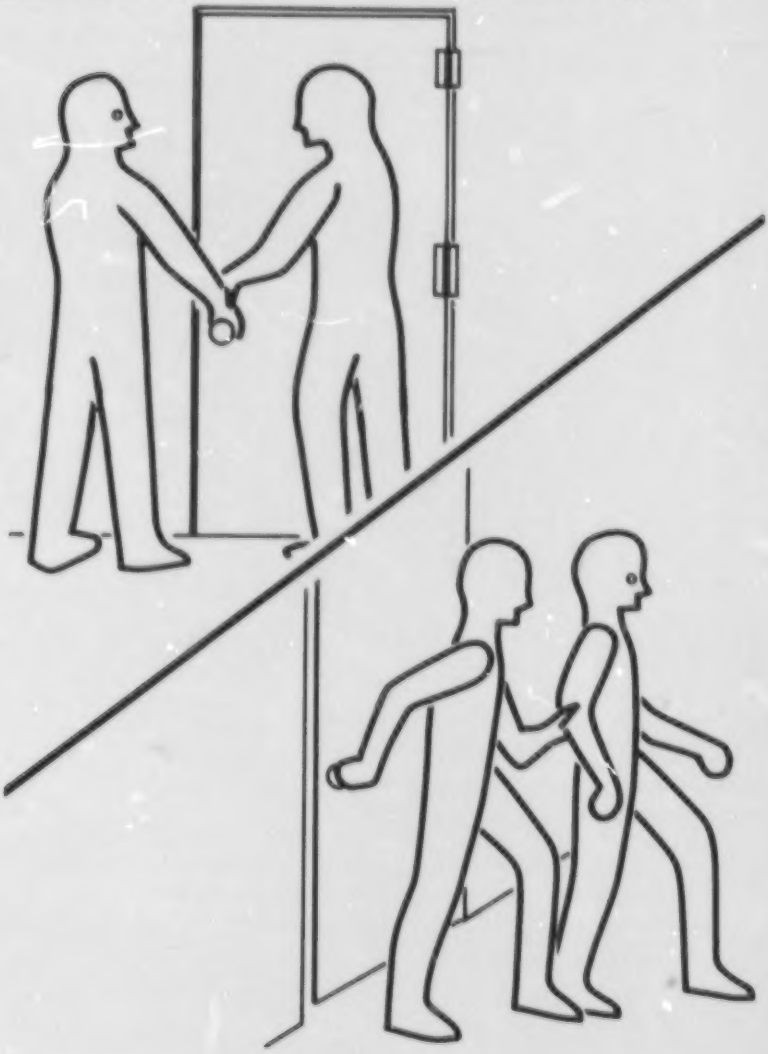
After the blind person has accepted your offer of assistance, you should ask, "Would you like to take my arm?" Brush your forearm against theirs so the blind person can grip your arm above the elbow.

The grip should be firm enough to maintain while walking, and not be uncomfortable. Children will grip the same as above except at the wrist. Some aged or disabled people may want to walk arm in arm. This offers more support than the grip. They may also wish to travel at a slower pace.

Your arm should be relaxed along your side and the blind person's arm will be bent at the elbow. With his hand, he will grip your elbow. Be sure to keep your arm close to your body. While using the sighted guide method, the blind person should travel a half step behind you. Pick a comfortable walking pace for both of you. If the blind person pulls your arm back, or tightens his grip, you are probably traveling too fast. Never try to push or steer a blind person ahead of you. You should also try to keep the person aware as conditions or surroundings change. Remember to mention curbs, steps, doorways, narrow passage, ramps, etc. Let them know if the stairs go up or down and when they reach the last step.

Opening doors

When you are approaching a door, say so. Have the blind person's free hand side of their body on the hinged side of the door. You should stop and change arms if not positioned correctly. Place your hand on the knob and let the blind person follow your arm to the door knob. Tell him (her) whether the door opens towards or away from you. Allow the blind person to hold the door open for both of you.

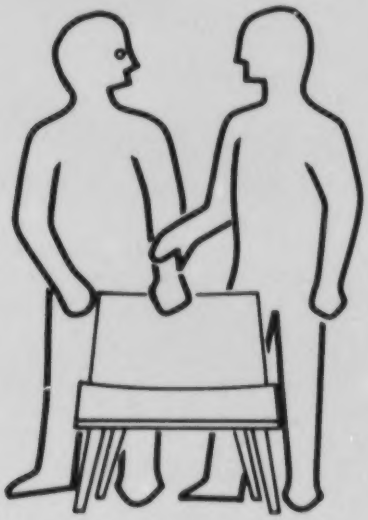


Once again . . . it is important to mention approaching curbs or steps. Remember to say whether they go up or down. Approach them directly, not at an angle. Have the blind person on the rail side of the stairs. Pause before steps and on the landing so the blind person can catch up with you. Mention when they are taking their last step.

When introducing a blind person into an unfamiliar room, there are several things to point out. First, tell the function and shape of the room. It is also important to explain the location of the door (center of the wall, left or right) and continue to use it as a reference point for describing the room. For example, "As we stand in the doorway, there are two chairs along the wall to your right." Give details that will be useful for orientation or as a point of interest. If the person is to only be in the room once, they only need to know the route from door to seat. If the room is a living or working quarters, more detail is needed.

On tours, objects and their approximate location is desired. People with visual impairments should be allowed to touch as many objects as possible. When orienting a person to a room, you should emphasize the important aspects of a room since too many unnecessary details can often be confusing. The blind person should also be allowed to explore the room.

When you are approaching a chair, tell the blind person. Put your hand on the back of the chair, making sure it is clear. Blind people don't really enjoy sitting on cats or old meat ball sandwiches. Let him/her know the direction it's facing. Let the blind person follow your arm to the chair. Please don't push your visually handicapped friend into the seat!

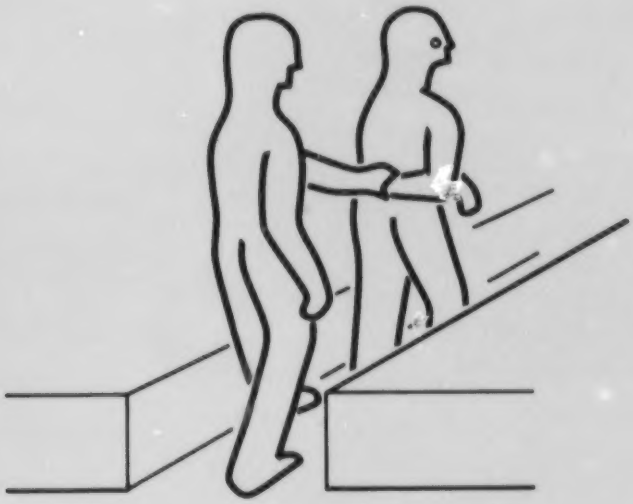


If you are assisting a person who uses a seeing eye dog, remember that the dog is responsible for the safety of that person. You should not pet, feed or distract him from doing his job.

When assisting someone with a guide dog, offer your left arm (not to the dog). You are to navigate and the dog is the safety officer. If a blind person uses a cane, offer assistance on their free hand side.

Narrow Passage

When approaching a narrow passage, say so out loud, while bringing your guiding arm behind you, to the middle of your back. The blind person should now be walking directly behind you. To avoid stepping on your heels, he/she will extend his/her arm. After passing through, resume the normal walking position.



Deafness and Hearing Impairments

General Characteristics

The most recent National Health Statistics Survey estimates that there are 16 million hearing impaired persons in the United States. Of this figure, more than 14 million are hard of hearing and 2 million are severely deaf. It has been found that at least 72 percent of hearing impaired persons are over 45 years old. It is important to note that more than 10 million persons who are without hearing aids could benefit from some type of amplification system.

Cathy Ingram, NPS interpreter who is deaf, uses sign language to demonstrate 18th Century life in domestic arts. *(Old Stone House — C&O Canal)*

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Hearing impairments range from mild hearing loss, which may be compensated by some form of amplification, to profound deafness for which amplification is not helpful. The following is a further breakdown of hearing impairments:

Hard of Hearing:

Mild: people with mild hearing loss learn speech by ear and are able to function almost normally in group and individual conversations. These people may have difficulty discerning singular and plural forms of words and in hearing subtle tone changes.

Marginal: people with marginal hearing impairments usually have difficulty understanding speech from a distance of more than a few feet, and in following group conversation.

Moderate: people with moderate hearing impairments have enough hearing to learn language and speech with amplification of sound through a hearing aid, when the auditory sense is aided by visual information.

Deaf:

Severe: people with severe hearing impairments have trainable residual hearing with amplification of sound through one or two hearing aids. Their language and speech do not develop spontaneously, so they must learn communication through specialized techniques.

Profound: people with profound hearing impairments cannot learn to understand language by ear alone, even with amplification of sound. Sign language is usually needed for communication.

The major handicap to a person with a hearing impairment is communication. The hearing impaired person is cut off from the usual way of acquiring and transmitting information and, therefore, communication is severely affected. A wide variety of communication methods are used by hearing impaired persons including sign language, reading and writing, mime and gesture, speechreading or a combination of these methods.

The time at which hearing loss occurs in a person's life has an effect on the development of communication, personal, social and educational skills. Congenital impairments (present at birth) are often caused by certain contagious diseases such as rubella, mumps, or influenza during the mother's pregnancy or hereditary factors. A person who is congenitally deaf does not learn language in the usual manner and, therefore, has no language frame of reference when learning to speak, write or read. As a result, reading comprehension and writing may be at a lower level than indicated by intelligence level. Other hearing impairments may develop at anytime during one's life as a result of childhood diseases, injuries or audial deterioration resulting from old age. Persons who have an acquired hearing loss usually have a relatively strong language base.

Major barriers to persons who are deaf or hearing impaired include understanding audio presentations or information that is communicated through speech or sound.

General:

Information, both interpretive and administrative, which is given orally or through audio methods, should be available through signing, captioning, written text and/or visual presentation. Training in basic sign language of park staff member(s) is recommended. Identification of local resource persons with sign language capability is encouraged.

In general, when editing audio visuals for captioning (e.g. films, video, slides) and transcribing audio materials (e.g. self-guiding cassettes, exhibit message units, etc.), avoid use of the passive voice whenever possible and simplify the more complex verb tenses. Sentences containing independent clauses should be broken into shorter, separate sentences, and written in subject/verb/object order when possible. Difficult vocabulary words should be replaced with more familiar synonyms. The purpose of condensing or adjusting language in materials is to assist in the understanding of the program message. Staff should employ judgment in making all editing decisions to ensure that captions or transcriptions always remain true to the intent of the original message. When preparing such information, consult with local deaf organizations on language developed for transcripts/tapes.

Information Stations:

The availability of materials and services (e.g. signing or audio transcriptions) should be made known through prominent display of the International Symbol of the Deaf at all information duty stations. Park staff who provide sign language capability should wear the Service's official "I Sign" pins. Only park staff who are certified sign language interpreters may wear

the "Sign Language Interpreter" pin. Where possible, a TTY-TDD service should be available at the site to make pre-site information accessible to the deaf community.

Personal Services:

Information delivered orally at living history programs, guided walks, talks, or tours should be available in print if a sign language interpreter is not provided. The printed text should be provided **prior** to the program and should convey the general content of the historical reenactment or talk.

When making a presentation, the Park interpreter should face the audience in a well lighted area and speak clearly to facilitate speechreading. Sign interpreters should be sure that they do not have their audience squinting into the sun.

Space or seating should be located close to the speaker to insure adequate visibility.

Training in basic sign language is highly recommended for park staff in order to provide services for deaf visitors. *(John F. Kennedy Center for the Performing Arts)*

Self-guiding Programs, Exhibits:

All audio elements incorporated into a self-guiding tour such as self-guiding cassettes or message units on wayside or indoor exhibits should be available to the visitor in print.

Audio-Visual Programs:

For deaf individuals: optimal modification of audio-visual programs (e.g. movies, slide presentations and video programs) would be captioning. However, if this not possible, keyed transcripts should be made available upon request **prior** to the program. Efforts should be made to provide a portable light source for use with transcripts in a dark room.

For hearing impaired individuals: headphones with volume controls or wireless or infrared systems may be made available.

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Involving Visitors with Hearing Impairments

A. Logistics

Review your program or tour route and try to anticipate any situations which may be difficult for hearing impaired participants such as areas which may have excessive background noise or other distractions.

Face the light or sun as you are speaking. Light from the side or behind you will cast shadows on your face making speechreading difficult.

Stand where everyone can see you and provide a clear view of your entire face and upper body. This is particularly helpful to hearing impaired persons who rely on body gestures and facial expressions as an aid to understanding what is being spoken. Keep your hands and visual aids that you may be holding away from your mouth as you speak.

B. Program Considerations

Review your existing slide shows, films, video tapes, and audio tours. Ideally, the films, video tapes, and slides should be captioned. If not, prepare a written script/text of all audio-visual programs and audio tours for use by hearing impaired visitors. The script/text should not be verbatim (its difficult to read a long text and watch a program at the same time), but should be condensed to include the main idea of each A/V frame or interpretive station. Time should be allowed for the hearing impaired visitor to review the script prior to starting the A/V program.

Make sure you have the attention of the group or individual before you start speaking. Make sure participants have understood what you said before going on to the next point or to the next station on the tour.

If at all possible, have a sign language interpreter available for programs. Remember that the sign language interpreter will be a few words behind, so speak accordingly.

Speak expressively. Hearing impaired persons may not hear subtle changes in your voice tone and may rely on facial expressions,

gestures, and body movements to understand you. However, be careful not to exaggerate or overpronounce words which will distort lip movements.

Keep instructions and explanations simple and brief, but use full sentences. Repeat instructions as often as necessary. Explain in concrete terms, avoiding abstract concepts. Try substituting new words for the more difficult concepts.

If you are showing large equipment or machinery, such as an old printing press, allow deaf and hearing impaired visitors to feel the vibrations of the piece as it operates. Supervise for safety.

If you are writing something, don't talk at the same time. Similarly, don't walk around or turn your back while talking.

Repeat questions or statements made by other people in a group. Remember that deaf persons are cut off from whatever happens outside their visual area.

C. Personal Services

Get a deaf person's attention before speaking to them by a light tap on the shoulder, a wave or another visual signal.

Maintain eye contact when speaking with a deaf person. Even a slight turn of the head may make speechreading difficult. The person may also think the conversation is finished if you look away while speaking.

Use a normal tone unless you are asked to raise your voice. Shouting will usually be of no value.

Remember that beards and mustaches hide men's mouths and mask expressions, making it difficult to speechread.

If a deaf visitor is accompanied by an interpreter, speak directly to the deaf person.

If you are having trouble understanding a deaf person, don't be afraid to say so. Ask that they repeat what was said or use pen and paper. Don't pretend to understand if you really don't. Communication is the goal — the method used is not important.

If you know some sign language, use it. Your attampts will usually be well received. If the deaf person has trouble understanding you, the person will let you know and you can try another method of communication.

Captioning National Park Service Audio-Visuals: A Perspective

Introduction:

The National Park Service, as part of its basic mission and by statute and regulation, is committed to providing a comprehensive park experience to all visitors. To fulfill this objective, a variety of interpretive activities are conducted and devices employed to expand and enhance the experience of the park visitor. A major interpretive tool for park managers, especially in the face of budget and personnel limitations, has been, and will continue to be, the use of audio-visual presentations such as films, video tapes, and slides to convey important park information to the visiting public.

Captioned visual programs provide the highest level of accessibility for deaf visitors. *(Hopewell Village National Historic Site)*

It has been demonstrated through study and research that captioning is the **most** effective method of adapting film and video materials for the deaf viewer. There are two types of captioning processes — "open" and "closed" captioning. "Open captioning" (where a text appears on the screen at all times) is the **only** option presently available for films and slides and can also be used on video programs. "Closed captioning" (where the text is encoded on a tape and is not visible on a screen **except** when a decoder is activated on a T.V. or video unit) is possible **only** on video tape or disc, but its utility is limited in that it requires special decoding equipment.

A series of answers to the most common questions concerning the use of and need for captioning follows:

Q. Why is it important and necessary to caption our audio-visual programs for hearing impaired visitors?

A. Over the years, a continuing goal of the National Park Service has been to insure that visitor programs and services are provided in such a manner that visitors with disabilities can receive as close to the same benefits of a park experience as non-disabled visitors. Research has shown that captioning is effective as a means of visually transmitting verbal information to people with hearing impairments. Deafness is not only the absence of hearing; it is also the dependence on vision. Correspondingly, because access to the spoken narration or dialogue is restricted for hearing impaired individuals, **reading** becomes the primary avenue for access to the audio message of any audio-visual program.

Section 504 of the Rehabilitation Act of 1973, as amended in 1978, requires that Federally funded or conducted programs be made accessible to people with sensory or physical disabilities. The intent of the Act is to effect fuller integration of disabled individuals into the mainstream of American life.

Captioning would be the optimal modification of National Park Service audio-visual programs because it enables accommodation of hearing impaired visitors in an integrated setting with the general public. Without this modification, hearing impaired visitors are essentially denied the information provided in our on-going park audio-visual activities which serve to initially inform and subsequently enhance the visitor's experience of significant natural, historical, and

cultural park resources. Undoubtedly, captioned films, slides, and video tape presentations would bring an added dimension to the interpretive experience of hearing impaired people visiting our parks.

Q. How many people are we talking about who could benefit from captioning?

A. More than 16 million Americans suffer from hearing loss (one out of every thirteen Americans.) Of this figure, more than 14 million are hard of hearing and 2 million are severely deaf. It has been found that of the total figure suffering from hearing loss, 3 million are school age children and approximately eleven million are over 45 years of age. Additionally, with the increased noise pollution, which is noise in excess of 85-90 decibels (e.g. rock music, power tools, factory machinery, jet airplanes, etc.), the incidence of permanent hearing loss among all age groups in our population is on the rise.

Q. What has been the viewing public's response to captioning?

A. There have been differences of opinion surrounding "open captioning." Some hearing viewers have expressed that open captioning can be an annoying intrusion on their viewing pleasure. Others have indicated that open captioning didn't bother them to the extent that they objected to its use. These views were revealed in a survey conducted for the T.V. industry and published in 1967 when the industry was considering captioning their network broadcast programs.

This study involved the showing of two captioned Walt Disney films to a sampling of families who were subscribers to a local cable T.V. system. The films were: "Bear County," a half-hour nature documentary, and "Big Red," a full-length feature film about a boy's affection for his employer's Irish Setter. Each participant was asked to view the two programs and to complete a detailed questionnaire concerning their individual reaction to the captioning of the films presented. The study reflected that about 30 percent of the respondents were bothered by the captioning. However, of that figure, 26 percent were "bothered slightly" and only 4 percent were "bothered a great deal." While the large majority of the respondents were not bothered by captioning — and in some cases the respondents indicated that the captioning even added to the enjoyment of the

programs — this fact was not considered by the T.V. industry.* The industry perceived from the data that **open** captioning would have a lengthy and tough fight to win acceptance, and commercial networks would not want to take the risk. Since the technology was available, the T.V. industry opted for closed-captioned programming. Additionally, their feeling was that closed captioning would receive wider acceptance during prime time hours.

In evaluating this survey, it would be important to keep in mind the context, specific purpose, and year in which this study was conducted.

Q. Where has captioning been used and what are some of the advantages?

A. Models for captioning have been around for years. The silent film era depended on title cards between scenes to describe dialogue and action, and foreign language movies still use subtitles. An even more familiar and almost daily example of this technique is the 40 hours a week of closed-captioned T.V. programming. In recent years, with the passage of section 504 of the Rehabilitation Act, both public and private institutions have begun to experiment with captioning services in their educational, social and vocational programs. A report published by Shroyer in 1973 revealed that 85 percent of the deaf children in his study using captioned educational films increased their reading rates and conprehension levels. Similarly, there have been spin-off benefits to other segments of the population: a Florida study revealed that developmentally disabled children learned to speak through use of open captioning of video taped instructional materials; a

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* The reaction of survey respondents to captioning on "Bear Country" and "Big Red:"

"What was your reaction to the captioning for this program?"

	"Bear Country"	"Big Red"
1. The captioning added a great deal to my enjoyment of this program.	5%	6%
2. The captioning added slightly to my enjoyment of this program.	12%	12%
3. The captioning did not bother me.	53%	58%
4. The captioning bothered me slightly.	26%	21%
5. The captioning bothered me a great deal.	4%	3%

1967 Survey conducted by HRB — Singer, Inc.

Fairfax County public school study with normal hearing children demonstrated that captioned video enhanced the reading and comprehension levels of slow learners; and in a study conducted at Harvard University, English language captions were found to be beneficial to students from other countries attempting to learn English.

One important advantage of **open captioning** National Park Service film orientation programs is that many people may not realize that they have impaired hearing or do not wish to admit it. Closed captioning requires not only the availability of sufficient decoding equipment, but, in most cases, a request for its use and a separate viewing area. Open captioning eliminates this problem and makes all audio-visual materials accessible to everyone.

Q. Are there alternatives to open captioning of audio-visual programs?

A. Yes, video tape programs can be either open captioned or closed captioned. Other alternatives include: captioning **below** the visual area which is being used in some NPS slide shows; closed-caption computer controlled T.V. or display system for slide programs, electric maps, etc. (this system has broad audio-visual applications); dual showing on T.V. with closed captioning in conjunction with a film; and a T.V. monitor with captions below the screen. For further information on these devices and others, call the Division of Audio-Visual Arts, FTS 925-6479.

Q. What does closed captioning require and how does it work?

A. Closed captioning requires the use of a special Telecaption decoder attached directly to or built into a T.V. set. The Telecaption adaptor also works with video cassette recording units with a tuner. The captions are in the form of an electronic code and are invisible until triggered by a unit equipped with this special decoding device.

Q. Where can the decoding units be purchased?

A. From the National Captioning Institute, Sears, Roebuck and Co., and various organizations of the deaf under the product name "TeleCaption." Two types of units are available: a captioning adapter

that can be attached to any television set, video or video cassette recorder with tuner, and a 19-inch portable color set with built-in decoding circuitry, called a TeleCaption television receiver. Both units are available through the National Association of the Deaf, the National Fraternal Society of the Deaf, Self-Help for the Deaf, and Telecommunications for the Deaf, Inc. Telecommunications for the Deaf also offers a lay-away plan. The caption decoder can also be leased through several cable system operators, primarily Tribune Cable Communications, Vision Cable Communications and American Cable Systems.

Q. How much does the equipment cost?

A. The price varies according to the purchasing arrangement. The price of the adapter is about $280; the cost of the television is about $400.

Q. What are the estimated total costs associated with processing open or closed captions for audio-visuals?

A. The cost of captioning a film or video tape is directly related to the running time of the audio-visual. Also the number of copies requested of a specific title will determine the cost per print price. Since most National Park Service self-sustaining* audio-visuals are between 15-30 minutes in length, we will use that time frame for the following estimated costs:

*Open captioning a 16mm film — costs***

# min.	Captioning service	Harpers Ferry Interneg. Production and Lab Print	1st print	Total costs	Cost per additional copy
15	$550	$680	$75	$1,305	$75
20	$700	$1,036	$100	$1,836	$100
30	$850	$1,404	$145	$2,399	$145

* *non-exhibit related*
** *cost estimates — 1983*

Steps to take for having an **existing** film captioned (1) Inform the Division of Audio-Visual Arts, Harpers Ferry Center (FTS 925-6498). (2) Make arrangements with a captioning service to have only pre-production work done (i.e., timing sheet, captioned script and proof work). Provide captioning service with typed transcript of film's sound track and a copy of the film for viewing. (3) Arrange with the captioning service to have pre-production materials sent **directly** to Harpers Ferry — Division of Audio-Visual Arts for the lab work (Harpers Ferry has all the original film negative materials and their production control procedures will insure visual quality).

(The above estimated costs were provided by the CAID Captioning Service located at 814 Thayer Avenue, Silver Spring, MD 20910 (301) 585-4363, Frank Rubin 587-5940, Len Novak and the HFC Branch of Visual Production Services, FTS 925-6479.)

The cost of **open captioning a 16-30 minute video tape** is about $1,395 (open captions can be viewed without a decoder). The cost of **closed captioning** the tape is the same but to view a closed-caption tape a decoder is necessary. This is a one-time only expense of $280 that is unnecessary with open-captioning. For both open captioning and closed captioning, the park would need to provide a ¾" master with the audio and a script (available from HFC). These estimated costs were provided by:

National Captioning Institute
Suite 1500
5203 Leesburg Pike
Falls Church, VA 22041

Tel-voice or TTY (703) 998-2400—Jane Edmondson or
Jane Norman

or: 1443 Beachwood Dr.
Hollywood, CA 90028

Tel-voice or TTY (213) 469-7000

The cost of open captioning sound/slide programs is about $11-$15 per slide. This cost would include typesetting for captions and one captioned master. Duplication costs would be about $.35-.50 per slide. The park would need to provide the master slides* and a typed script of the audio portion sequenced to the visuals. These estimate costs were provided by:

Consolidated Visual Center
2529 Kenilworth Avenue
Tuxedo, Maryland

(301) 772-7300—Al Derwent

This company is on the GSA schedule and does work for the Harpers Ferry Center.

Q. Does the Service have the capability to provide captioned interpretive materials?

A. The Harpers Ferry Center can provide technical assistance to parks interested in captioning their **existing** films or tapes. (Contact the Division of Audio-Visual Arts.) However, the decision and expense associated with captioning interpretive materials is the responsibility of the individual park unit and, in each case, a **specific** request for captioning needs to be made. Similarly, in instances where a new film or audio-visual program is being funded through available monies at Harpers Ferry Center, the Center will provide captions, if requested, but at the park's expense.

Q. Are there examples where captioning has been used with National Park Service interpretive audio-visuals?

A. Yes, Independence has a captioned version of their orientation film which is shown upon request. Hopewell Village uses its captioned slide presentation with the narration running simultaneously. The slide program is shown to all visitors as part of the orientation program. Mt. Rushmore has a captioned 12 minute video tape which is carried continuously on one of ten closed-circuit T.V. monitors located in their view room. Harpers Ferry Center has begun closed captioning of all new video programs.

** To insure visual quality, **original** slides should be provided for open captioning/duplication process. The Branch of Audio Visual Arts has the originals from sound/slide programs they've produced.*

Q. What are some of the options available to parks desiring to make their audio-visual programs accessible to hearing impaired visitors?

A. There are several options with regard to captioning, some are more suitable to a park's audio-visual needs than others. In all cases, it would be wise to initially discuss your needs with the Division of Audio-Visual Arts. Captioning technology is improving every day and the Division would be aware of the newest devices available. The following is a brief discussion of just **some** of the options available:

In adapting a film: A park may decide to open caption the main film used in their orientation program viewed by the general public. This would be an ideal way to go. On the other hand, a park may decide to provide an open-captioned **version** of the master film and make it available upon request. If a park has the appropriate display equipment, another option would be to have a ¾" video copy of the film made with open or closed captions.

For video: A park has the option to open caption or close caption an existing video program. The cost to caption in either format is the same but, again, a closed-caption video presentation will require the use of a Telecaption decoder. An open-captioned video will not need this special equipment. The advantages to a closed-caption tape is that the same tape can be shown with or without captions, depending on the needs and preferences of the viewers.

For slides: Open captioning a sound/slide program can be done either by superimposing captions **directly** on the slides or having captioned slides made of the text itself. The second option would require an additional projector unit for the captioned text slides that is synchronized with the visuals as well as a separate screen for projection.

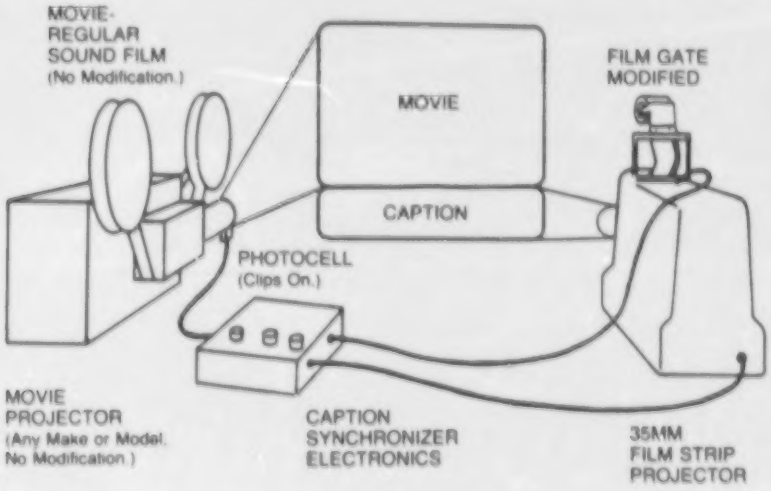
The use of **printed scripts** could serve as an **interim** measure for making films, video tapes, and slides accessible to hearing impaired visitors. However, this method has proven to be a less than suitable option in the long run.

New Technology:

A system that can be used for both film and slides has been developed by the National Technical Institute for the Deaf. This system permits captions to be projected from a modified film strip projector in synchronization with an unmodified picture projected with any existing film or slide projector. The system employs a film strip projector that projects the caption either superimposed over the picture or underneath the image. Timing synchronization information is provided alongside each caption as a series of bars which can be reproduced by a pair of photocells fitted inside the filmstrip projector. The "bar code" information is fed to a black box memory.

A photocell is temporarily attached to the lens rim of the projector where it does not affect the projected picture. The photocell responds to each opening and closing of the projector shutter. After the number of shutter openings specified by the bar code is associated with the caption, the next caption is brought into place, and, with it, a new timing code. The captions stay in synchronization with a movie even if the film projector is running too fast or too slow. An average 20 minute film requires approximately 10 feet of inexpensive black and white film for the captions.

This system is currently being tested by the National Park Service at the Harper's Ferry Center, Division of Audio/Visual Arts.



Amplification Systems

Access to public information is a right denied to most of the estimated sixteen million people with hearing impairments in the United States. Most of these people have some residual hearing and, in many situations, can use hearing aids. Hearing aids are of little use, however, at public meetings, performances, and other public events where the hearing aid also amplifies background noise masking the information. Until recently, there was no effective way of providing audible information to hearing impaired people. Now, however, four sound amplification systems (induction loops, AM radio broadcast systems, FM radio broadcast systems, and infrared radiation systems) have been developed for use in various public settings, such as auditoriums, theaters, meeting rooms, courtrooms, classrooms, and sporting arenas.

Some of these systems rely on hearing aids which can pick up electro-magnetic fields. These hearing aids must have a telephone, or "T" switch. In the "on" position, the hearing aid is capable of picking up the magnetic field and converting it back to sound. Generally, these systems do not pick up disturbing background sounds or noises resulting from poor acoustical design of a room. This results in a much clearer and more direct signal than is possible through ordinary listening. Profoundly hearing impaired persons, in particular, are able to generate far more volume than they usually can produce because "T" switches allow maximum use of the potential output of their hearing aid. This is precluded when the hearing aid is switched on for ordinary conversation, because the use of high volume controls usually results in feedback or squeal. This feedback is not only annoying, but is also often intolerable for persons with normal hearing. Following is a discussion of the four above-mentioned audio amplification systems.

Induction Loops

The induction loop system takes the electronic signal from *any* sound system (a microphone, tuner, television, etc.) and amplifies and uses that signal to energize a wire which encircles the space, setting up a magnetic field within that space. The electrical field can then be picked up by switching a hearing aid to the "T" position. Advantages of this system include low cost and easy temporary installation. The disadvantages are that AC hum is sometimes also picked up; the quality of the signal is sometimes weak; it is difficult to hide the wire in

permanent retrofit situations; the signal can be heard through walls and picked up outside the intended range; and there is only one channel.

AM Broadcast Systems

AM and FM broadcast systems are similar to each other. Both take the electronic signal (similar to the loops discussed above), translate it into a radio signal in FM or AM wave length, and broadcast it. The signal is then picked up by a pocket AM or FM receiver and heard through earphones or the person's hearing aid. The two systems differ in the means of broadcast and the number of channels available.

AM systems generally use an antenna wire which is similar to an induction loop encircling the space. The AM signal is then passed through the antenna and picked up anywhere in the vicinity by a pocket radio. Advantages of this system are: the low cost of receivers for users and the availability of up to four or five channels in each area. Disadvantages are that it requires an AM pocket radio for each user; the signal passes through walls (this presents a security problem); there may be interference from local AM radio signals; and the antenna loop may be difficult to disguise in retrofit installations.

FM Broadcast Systems

FM systems generally use a transmitter, instead of a loop antenna, to broadcast their signal in the Audio Training Band of the FM wave length. Advantages of the FM systems include: the low cost of the transmitter, 30-channel availability, good outdoor operation, stereo capability, and good signal-to-noise ratio. This system is especially good for schools because of the ability to switch between one channel (teacher/class) and another. Disadvantages include the high cost of receivers (each person must have one) and lack of security (the signal may pass through walls).

Infra-red Radiation Systems

Infra-red systems translate the line level or microphone electronic signal into an infra-red frequency light signal. This signal is then radiated throughout the space by one or more panels depending upon the size of the space of light-emitting diodes. Modulated infra-red

signals radiate and reflect off most surfaces. Line of sight, therefore, is not required. Signals are picked up by a portable receiver provided for each listener. The receivers have either an earphone or an induction loop output for the use of the wearer. Advantages are: the signal is secure and can be used in theater auditoriums and conference rooms with the assurance that no signal will pass through walls; multiple channels are available, allowing stereo signals on simultaneous broadcasts; the system can be expanded at a minimal cost; a high signal-to-noise ratio is available; and installation is easy. Disadvantages include the high cost of receiver and transmitter, and the inability to work in direct sunlight.

(This information was taken from *Report*, National Center for a Barrier Free Environment. Individuals who wish further information regarding hearing amplification systems should contact the National Center in Washington, D.C.)

Telecommunication Devices for the Deaf (TDD)

Communication is a vital element in our daily lives. Without effective means of communication, we are cut off from people and information. The telephone has become a vital link between people and has become one of the easiest and most important means of communication and receiving information. Most of us take this technology and the impact it has on our lives for granted.

Until recently, deaf and hearing impaired people were not able to use this effective and convenient means of communication. Technology has now made it possible for the hearing-impaired population to use the telephone through special assistance devices called Telecommunication Devices for the Deaf (TDD).

People often confuse "TTY" and "TDD". A TTY is a teletypewriter that enables users to send and receive printed messages through telephone lines. A TDD is a type of TTY and you will often see these acronyms used interchangeably. A TDD (or TTY) allows a hearing-impaired individual to make a telephone call directly to another person with similar equipment without the need for an interpreter. This device resembles a typewriter with a keyboard and may have either (or both) a visual display or capability for printing out on paper the message received. The conversation is typed rather than spoken.

The importance of having a TDD at our National Park Service sites cannot be overemphasized. The presence of a TDD enables a hearing-impaired visitor to call directly to get information on park interpretive programs or services, program schedules, local accommodations, travel directions, weather conditions, etc., — in other words, to receive necessary information as conveniently as anyone else. The availability of a TDD would benefit deaf or hearing impaired employees.

Selecting a TDD

There are now a wide range of TDDs available, some with quite sophisticated equipment which may or may not be important for your needs. Before purchasing a TDD you should evaluate your needs and try different models, and decide which features are important to you. Is it necessary to keep a record of incoming and outgoing calls? Consider a model with attached automatic printer. Will the TDD be used in different locations depending on the season and planned park programs? Consider a portable model which can be carried to different locations. After you evaluate your needs, call a manufacturer or authorized dealer, discuss your needs, ask for a demonstration, obtain product literature and compare models. Consider warrantees, service procedures, and price before making a decision. TDD manufacturers have varying price structures and there is a wide price range between models (prices may range from $159 to $1,000 depending on model and features).

TDD Language

Several abbreviations are used with the TDD. Some of the common ones are:

GA—Go ahead (To indicate you have finished talking and the other party may now respond. Used like "over" in CB lingo.)

SK—End of entire conservation (Comparable to "over and out" in CB lingo.)

HD—Hold on.

XX—Misspelling

U—You

Q—Question

It is considered polite to end a conversation with a "good-bye" or "so long" or "thanks again" or even "have a nice day" prior to signing off before you type "SK."

Publicity

Once you have acquired a TDD, it is extremely important to publicize the number. All informational brochures should contain the "voice" phone number as well as the TDD number. Public notice of the number should also be issued frequently — people tend not to take down a number until they need it.

For further information, contact:

Telecommunications for the Deaf, Inc.
814 Thayer Avenue
Silver Spring, Maryland 20910
Voice or TDD (301) 589-3006

Mental or Learning Impairments

Mental or Learning Impairments

There are three general categories of mental disabilities: Mental Retardation, Learning Disability, and Emotional Disturbance. While common behavioral characteristics may sometimes be found among members of these groups, each disability is marked by distinctive features and should be considered separate from the others. People who are mentally disabled have a wider range of abilities and limitations than any other disability group, both because of distinctions between Mental Retardation, Emotional Disturbance and Learning Disability, and because of the wide range of abilities within each group.

Some of the most severe barriers a person with a mental, learning, or emotional disability faces are attitudinal barriers. They are generally least understood by the general public. This often results in apprehension and general avoidance of persons with this type of disability. Consequently, the mentally, learning, or emotionally disabled person will frequently keep his often "invisible" disability to himself.

Mental Retardation

There are an estimated 16 million persons with mental retardation in the United States. Material from the Census of Population, U.S. Department of Commerce, indicates that there are

- 5 million persons under the age of 5 years and 1.3 million people between the ages of 5 and 15 with some degree of mental retardation
- 7 million people between the ages of 16-20 and 3.6 million people over 21 are mentally retarded to some degree.

In people described as mentally retarded, learning develops slower than average. Reasoning and judgment capabilities may also develop at a slower pace. For most people with mental retardation, it is not the ability to learn that is missing, but the speed and ease at which things are learned is slower.

Mentally retarded people are often overprotected and discouraged from exploring the world or interacting with others. Often they are limited to participating in programs that are designed "especially for their needs," and allowed to socialize only with "their own kind." After finishing a specialized education program as a child or young adult, many may spend their adult years in inactivity.

Fortunately, the practice of institutionalizing mentally retarded people is changing. With more appropriate training and education, many people learn to become independent citizens, manage their own homes or apartments and money and successfully compete in the job market. Others may live in small group homes, supervised by live-in counselors, and work in sheltered workshops or semi-skilled jobs.

Learning Disability

The estimated number of school-age children with learning disabilities varies widely. Certain estimates, based on data collected by professional researchers, set the figure at 7.5 percent of the population. Due to problems in identification and data collection, there are no reliable statistical estimates on the numbers of learning disabled adults. However, the number is considered to be quite high.

In some instances, a special program with emphasis on personal services may be appropriate. *(Point Reyes National Seashore)*

The 1968 National Advisory Committee on Handicapped Children stated that:

> Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic.

It is obvious from this definition of Learning Disability that the term covers a wide spectrum of potential obstacles that a child may encounter in attempting to acquire school-related skills. For purposes of understanding this group as distinct from mentally retarded persons, it is important to keep in mind that a learning disability is generally confined to *one* aspect of learning. While both learning disabilities and mental retardation interfere with a person's ability to learn, learning disabilities are more specific and occur in people with average or above average intelligence.

A learning disabled person can experience poor spatial orientation or have a poor sense of direction, or have severe difficulty in reading. The severity of the disability frequently determines if a disability is identified at all. Many adults today who dropped out of school because "they just didn't do well" may suffer from mild learning disabilities.

Learning disabled persons are even less identifiable than mentally retarded persons. There are many different kinds of learning disabilities and these come in different combinations which have an impact on interpretive programming. Someone may have problems with reading information, while others may have difficulty distinguishing left from right. Subsequently, a non-reader may be especially attuned to spoken information. Someone having difficulty with a string of verbal instructions may need simple, direct statements aided by a diagram. Because there are no reliable clues to indicate a person may be learning disabled, any programmatic adjustment for this group will be largely dependent on sensitive and alert interpreters who can adjust presentations to meet individual needs.

Emotional Disturbance

The number of people experiencing emotional disorders in the United States is very high. The estimates vary according to the nature, severity and duration of the disability considered. A Joint Commission on Mental Health survey set the number at 12 percent of the population.

Emotionally disturbed persons may suffer from a range of disabilities from relatively short-lived depression to severe psychosis that may last for years. Clinical diagnoses include such widely different variations as anxious-neurotic, manic-depression, passive-aggressive, and personality disorders, as well as numerous others.

Like other mental disabilities, Emotional Disturbance defies easy and specific definition. It may be said that, in general, emotionally disturbed persons may display an inability to concentrate, an inability to build or maintain satisfactory interpersonal relationships, inappropriate behavior or feelings under normal conditions and, frequently, a general, pervasive mood of unhappiness. Stated simply, an emotionally disturbed person is usually "emotionally disturbing" to those around him, particularly if they love or are concerned about the person.

The practice of institutionalizing persons with emotional disorders has declined dramatically in the past 25 years. More sophisticated and effective drug therapy has enabled many people experiencing emotional trauma to remain in the mainstream as they go about the task of healing. During acute stages of an illness, hospitalization may be used, however, only in the most severe cases are persons hospitalized for more than a few months at a time.

The emotionally disturbed person's ability to benefit from programming is affected by his emotional state and rarely by his innate intelligence. It is a mistake to confuse the two, especially since emotionally disturbed persons are frequently highly intelligent and therefore would be greatly offended if considered mentally retarded.

General:

Flexibility on the part of interpretive staff is essential. The interpreter may need to change or modify elements of a program on the spot for a variety of reasons. When programs are designed for a specific group, the particular level of impairment and development must be addressed. Prior meetings and/or consultation with persons familiar with the group should be sought. In **some** instances, a special program with emphasis on special services may be appropriate.

Personal Services:

In general, program content for mentally retarded persons should be at a level which will facilitate comprehension. Interpretive information should be delivered concisely in short segments, be success oriented, encourage participation, and be reinforced through repetition. Program content for learning disabled persons does not have to be at a lower comprehension level. Focus instead should be on the best **method** of communication to enhance comprehension for a particular individual.

Pointers:

- Demonstrate specific concepts rather than verbalize.
- Involve as many senses as possible in order to involve participants actively.
- Use as many touchable items as possible. Keep information concrete rather than abstract (use materials that are visible as a point of reference).
- Use repetition to reinforce important points.
- Repeat concepts using different words and phrase the interpretive message in different ways.

- By asking participants to rephrase concepts, the interpreter can assess the group's comprehension level and can change his/her approach if necessary.

Nonpersonal Services: Park Information

Park interpretive materials selected for mentally, emotionally, and learning impaired persons should be more visual than verbal (photographic materials will serve to reinforce the visual memories of a visit). It is important to remember that visitors may have low reading ability or may not read at all.

Self-guiding Programs:

Interpretive information selected or developed should use technical terms sparingly and should be supplemented by any additional materials which would enhance the understanding of significant resources and concepts covered in self-guiding programs.

Opportunities for tactile experiences reinforce the interpretive message for many disabled visitors. *(Rock Creek Park)*

Involving Visitors with Mental/Learning Impairments

Developing guidelines for working with disability groups and disabled visitors is difficult when one considers the varying abilities of persons among disability groups as well as within disability groups. It is even more difficult when considering persons with mental or learning impairments because the categories of Mentally Retarded, Emotionally Disturbed, and Learning Disabled are unique within themselves. Recognizing this dilemma, the following interpretive tips are very general in nature. It is important to remember that each disabled person should be treated as an individual with individual abilities and individual needs.

Mental Retardation

Review your program or tour route with attention to length of time for completion. Consider shortening a program to 30 or 40 minutes for the benefit of mentally retarded visitors who are present.

Allow extra time for moving from one place to another. Some mentally retarded persons may have mobility or balance problems and may move slower than the rest of the group.

Allow participants to set their own pace. Most persons with mental retardation learn just like everyone else but usually at a slower pace. Allow extra time to fully experience the resource.

Some persons with mental retardation may have difficulty concentrating and following a program in the presence of background noise and surrounding activity. Consider changing the program location if necessary to eliminate these distractions.

Use as much demonstration as possible with your verbal explanations. Repeat directions or information as often as necessary. Reinforce your information with tactile experiences and media aids. Don't rely solely on verbal methods.

When talking, keep your concepts clear and concise using concrete rather than abstract examples. Try to repeat concepts using different words and phrase them in different ways to facilitate understanding.

Treat mentally retarded adults as adults, not children. Persons with mental retardation deserve the same respect and dignity as all other visitors.

People with mental retardation may be slow to respond, so don't stop asking questions when appropriate to the program. A slow response may be the result of timidness or just simply a slow response — not that the person is rude or ignoring you.

Be sensitive to interest or lack of interest in your program and be flexible enough to change or modify your program accordingly.

Make sure your programs offer opportunities for success, new experiences, and challenges for every participant. Do not underestimate someone's abilities and interest.

Be aware that some persons with mental retardation may be taking medication which may make them sensitive to long exposure to the sun. Route your tour so shade or shelter is available.

For a walking tour or hike, provide ample opportunity for rest stops, including use of restrooms and water.

Be aware that some persons with mental retardation may have problems with coordination, balance, agility, strength or stamina.

Remember that mental retardation is not contagious. Mental retardation is not an illness and people with mental retardation should not be treated as if they were sick.

Don't "talk down" to the mentally retarded individual or group, but keep your talk on an understandable level.

Learning Disability

Review your programs. As much as possible, provide demonstrations as well as verbal interpretation. Use media aids to reinforce your information.

Don't interpret a lack of response from a learning disabled person to be rudeness. In some cases a learning disabled person may have a processing problem which might affect social skills which in turn may produce unconventional responses.

When providing directional information, reinforce verbal directions with physical directions. In some cases, sketching a simple map may be helpful.

You may find that some learning disabled persons may seem to be standing too close to you or staring at you as you talk. This action is not uncommon for some learning disabled persons as they attempt to block out competing noise or activity and concentrate on what you are saying.

Many learning disabled persons may need information repeated often because they may have difficulty interpreting what was said.

Difficulties in coordination are a major problem for many persons with learning disabilities. Therefore, fine motor tasks such as picking up a pebble or handling a moving insect may be difficult. Balance may also be a problem and interpreters should exercise care in moving a group through an area requiring balance (e.g., on a nature hike).

Emotional Impairments

Accept participants as people and don't expect violent or unpleasant behavior. Rely on group leaders if present to handle difficult situations should they arise.

Be supportive and friendly. Remember that people with emotional impairments may be very sensitive to stress and new environments.

Be enthusiastic about your program, while maintaining a position of authority and respect.

People with emotional impairments may become frustrated easily. Activities that ensure success for each participant are important.

Choose program activities that promote cooperation between individuals to achieve common goals.

Encourage group members to actively participate, but do not pressure them. Choose activities that allow opportunities for spectators as well as active participation.

Allow participants to choose the activities that they would like to do. Don't let your expectations and fears limit the opportunities you provide.

Don't rush activities. Be aware of changes in individual and group moods.

Some participants may be taking medication which may affect their responses. They may appear to be uninterested or unable to understand your program. Relax and work with them at their own pace.

Don't react to people with emotional impairments as if they are "sick." Their "condition" is not contagious; treat them as you do anyone else.

Section III
Comprehensive Planning/Implementation

To ensure full accessibility to disabled visitors, park staff must take a systematic approach to access planning. To determine what modification(s) would be most appropriate to improve access in a given program, consideration should, first of all, involve a review of the range and type of all interpretive programs and services offered. Since there are many different situations where interpretive programs and services are offered within a park area, the decision on the kinds of modifications needed will have to be evaluated consistent with park program objectives.

Each consideration should then be evaluated using the same criteria: (1) benefits to disabled visitors, (2) effect on program objectives, (3) availability of NPS staff, (4) projected time required to make needed modification(s), (5) possible safety hazards, (6) cost, and (7) impact of any alterations of park resources.

From this assessment, park staff should develop a park *Program Access Plan* which would include the identified problem or barrier to access, the recommended solution, funding sources, and target date for completion. (The development of a Park Program Access Plan for physical and programmatic access is directed by Special Directive 83-3.) The development of an Access Plan provides a **comprehensive** approach which will help avoid the danger of spot decisions for accommodation, improper handling of a situation or changes which are enabling for one disability group but disabling for another. More importantly, such a comprehensive approach will enable a park to more appropriately establish **priorities** for the type of action which will benefit the largest number of visitors. The Program Access Plan should be incorporated into the park's *Statement for Interpretation*.

Interpretive staff should be prepared to justify why a particular action was chosen. If the action necessitates any physical alteration of the resource, appropriate compliance procedures should be followed. While actions to accomplish some necessary program modifications will have to be planned and budgeted, some can be accomplished with little cost and effort. If time is required for planning and budgeting, it will be important to develop **interim solutions** which provide temporary or partial access to the maximum extent feasible. Temporary methods may include, for example, locating a program in an accessible facility or area during the period which a facility or area is undergoing physical modifications; or providing hearing impaired visitors printed scripts of films which are budgeted for captioning.

Planning on what to do and what not to do should be made in cooperation with disabled persons and/or their representatives. This type of cooperation offers perspective on what is reasonable and feasible given the nature of the activity and assures the appropriateness and usability of access considerations. Cooperative efforts will also provide guidance and assist in the prioritization of projects and activities to be completed.

Publicizing Accommodations

Public notification of the existence and location of services, activities, and facilities which are accessible to and usable by disabled visitors is essential. For example, information about programs and services which are available at accessible locations and different media (e.g., cassette, large print, braille, tape transcriptions, sign language, etc.) should be posted at major visitor contact stations and noted in park informational materials. A park may have a variety of accessible programs and services, but if these benefits are not communicated to the disabled visiting public, they may never know of their existence.

The use of the International Symbol of Access and the International Symbol of Deafness (as appropriate) at major attended stations and in park informational materials is an accepted and understood means of alerting disabled visitors to a park's accessible features, programs and services. In all instances, the International Symbols should be accompanied by the necessary supplemental information, such as "ask for information here," or "interpretive tour cassette," or "sign language tours available upon request."

Complete and accurate information about park features, accommodations, and descriptions of special conditions and opportunities in the park which will affect a disabled visitor's experience are critical to the effective operation of visitor programs and services. The staff should provide basic informational services which include, but are not limited to, (1) descriptions of the park and its environs which would enable disabled visitors to know of the physical requirements and other aspects of specific park resources; (2) information on the availability and location of accessible convenience facilities; and (3) information on the availability and location of alternative interpretive devices for hearing and visually impaired visitors. This kind of information allows **all** visitors the opportunity to make decisions on what to do and where to find it in a park setting.

Many parks have developed separate "accessibility guides" which contain all the necessary information which may be relevant to a disabled person's visit. Some of the guides are simple xeroxed pages, others have been commercially produced complete with pictures. The format of the guide is not important. What is important is the accuracy and completeness of the information it contains and the degree to which the information may enhance a disabled visitor's park experience.

Conclusion

In 1872, the National Park idea, shaped beneath the grandeur of Yosemite Valley and the Sierra Redwoods, was realized with the establishment of Yellowstone National Park, Wyoming. Today, the National Park idea has grown into a wondrous treasury of history and nature which includes mountain wilderness, wild rivers and seashores, citadels, battlegrounds, places where our history was made, homes of historic and prehistoric Americans, and natural areas of desert, swamp, forest, and island.

Yet, the National Park Service is more than the custodian of our cultural, historical, and national heritage. We provide a public service through our specialists who are engaged in the work of revealing to the millions who visit the parks something of the beauty and wonder, the inspiration and meaning that lie behind what the visitor can perceive. This is called "interpretation," and it is one of the most important single activities of the National Park Service.

Interpretation is a vital part of the park experience for visitors and is no less important for visitors who have a disability. Physical access to our park sites is not enough. In order to assure that a person with a disability can experience the national parks the same way everyone else can, interpretive programs must also be accessible. To not provide this type of access results in experiences for disabled visitors that fall short of the standards which we strive to achieve.

"In our efforts to make our parks available to everyone, we must remember that barriers work both ways — they deny individuals the resources, the potential, and the wealth of our park system; and they deny us access to the "human resources" of the park visitor. The development and full utilization of those "human resources" enrich the cultural and social fabric of the natioh as a whole and we, as a nation, are the poorer for the lack of that access and interchange. The Service must continue to demonstrate its imaginative leadership in providing full spectrum participation in, and enjoyment of, our nation's treasury of parks, monuments, and recreation areas by ***all*** *who wish to visit them."*

Russell Dickenson
Director, NPS
1981

The goal of the National Park Service is to provide the highest level of accessibility possible and feasible so that our parks, monuments and recreation areas can be enjoyed by all who wish to visit them. *(Lincoln Memorial)*

Appendix

United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

June 30, 1983

SPECIAL DIRECTIVE 83-3 Annual Review

To: Directorate, Field Directorate, WASO Office and Division Chiefs, and All Superintendents

From: Director

Subject: National Park Service Policies on Accessibility for Disabled Persons

This Special Directive supersedes Staff Directive 77-4 (Revised), Accessible Facilities for Handicapped Visitors, dated August 22, 1978. Upon receipt of this Directive, all copies of Staff Directive 77-4 (Revised) should be removed from the files and destroyed.

Over the past few years, The National Park Service has significantly improved accessibility for disabled persons within the National Park System. These policies are designed to support the Service's efforts to provide access to the broadest cross section of park visitors as is possible and are in accordance with the Architectural Barriers Act of 1968 (P.L. 90-480) and the Rehabilitation Act of 1973 (P.L. 93-112) as amended in 1978. The purpose of this policy statement is to articulate the principles guiding our efforts in this area.

The National Park Service Policy Council has recommended and I have approved the attached general statement of policy and the specific policies relating to other NPS activities. The format is designed to facilitate eventual incorporation into the Management Policies Manual.

These policies are effective immediately. In order to implement these policies, within one year of the date of this Special Directive, each park unit in collaboration with qualified persons should prepare a working list of access problems in both programs and facilities. The problems should be arranged in priority order and the list should be reviewed and updated annually.

Actions should be taken at the earliest practicable time to remedy the problems utilizing existing operating monies, cyclic maintenance funds, park restoration and improvement funds, or other appropriate sources. Items requiring large expenditures of funds should be identified so that special attention can be given to them in setting regional and national funding priorities.

Enclosures

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General Statement of Policy on Accessibility for Disabled Persons

POLICY STATEMENT

IN THE PLANNING, CONSTRUCTION, AND RENOVATION OF BUILDINGS AND FACILITIES AND IN THE PROVISION OF PROGRAMS AND SERVICES TO THE PUBLIC AND EMPLOYEES, IT IS THE POLICY OF THE NATIONAL PARK SERVICE TO PROVIDE THE HIGHEST LEVEL OF ACCESSIBILITY POSSIBLE AND FEASIBLE FOR PERSONS WITH VISUAL, HEARING, MOBILITY, AND MENTAL IMPAIRMENTS, CONSISTENT WITH THE NATURE OF THE AREA AND PROGRAM AND CONSISTENT WITH THE OBLIGATION TO CONSERVE PARK RESOURCES AND PRESERVE THE QUALITY OF THE PARK EXPERIENCE FOR EVERYONE.

This policy is based upon the commitment of the National Park Service to provide access in our programs and facilities to a broad cross section of the visiting public. It defines policies in compliance with the intent of the Architectural Barriers Act of 1968 (P.L. 90-480) and Title V of the Rehabilitation Act of 1973, as amended (P.L. 93-112).

Basic Principles

This policy has been established to recognize and adhere to the following basic principles:

- Disabled people are members of the visitor group at large and the National Park Service will provide for their access to **existing facilities and programs** to the highest degree feasible and possible. Special, separate or alternative facilities and programs will be provided only when access to existing facilities and programs cannot reasonably be afforded. When necessary, special assistance will be provided discreetly so as not to draw undue attention.

- The determination of what is feasible and possible will be made with careful consideration of existing obligations to preserve and protect the cultural and natural resources that we manage.

Application of Policy to Specific National Park Service Operations

As indicated in the policy statement and as supported by the two legal mandates, accessibility for disabled persons will be provided in both **facilities** and **programs.** This means that every reasonable attempt will be made to enable disabled persons to get into our buildings and facilities, and once there to receive the same benefits, services, and information provided to all visitors. (See policies on accessibility related to specific National Park Service functions under Park Planning, Park Facilities, Cultural Resource Management and Preservation, Use of the Park, and Concessions Management.

Policy Implementation

This policy promotes the philosophy that, while maximum accessibility is the goal, partial accessibility is better than none and that improvements should be made in an orderly and priority-conscious manner. Access problems in both programs and facilities should be identified by each park unit in collaboration with qualified persons and listed in priority order. That list should then be reviewed and updated annually. Actions should be taken at the earliest practicable time to remedy the problems utilizing available funds or other sources whenever possible. Items requiring large expenditures of funds should be identified and considered in setting regional and national funding priorities.

Policies on Accessibility to Specific National Park Service Functions

PARK PLANNING

Planning for Accessibility for Disabled Persons

It is the policy of the National Park Service to incorporate the issues of accessibility in all components of the Servicewide planning process, including the General Management Plan, the Statement for Management, the Development Concept Plan, the Comprehensive Design, and the Interpretive Prospectus. The General Management Plan and the Statement for Management will broadly support the general policy of providing access to all visitors. The Development Concept Plan, Comprehensive Design, and Interpretive Prospectus will then identify the specific ways in which the facilities and programs will be made accessible to the various disabled populations.

It is the policy of the National Park Service to invite disabled people with appropriate expertise and/or knowledgeable representatives into all aspects of the planning process in an advisory capacity at an early stage, and to maintain their collaboration in the park's subsequent management, in order, among other things, to assure the appropriateness and usability of access modifications. In making recommendations for appointments to advisory boards and commissions, disabled persons or others familiar with accessibility issues will be considered. All public gatherings shall be held in wheelchair-accessible places, and auxiliary aids for hearing and visually impaired persons should be provided when anticipated or requested.

PARK FACILITIES

Accessibility for Disabled Persons in Park Facilities

(supercedes section on "Facilities for the Handicapped" on page III-7 of the Management Policies Manual)

In accordance with the mandates of the Architectural Barriers Act of 1968 and Section 504 of the Rehabilitation Act of 1973 as amended in 1978, it is the policy of the National Park Service to provide the highest level of accessibility in all visitor and management buildings and facilities as is possible and feasible, consistent with the nature of the area and facility. The degree of accessibility provided will be proportionately related to the degree of man-made modifications made to the area or facility and to the significance of the facility.

The **developed area** of the park, including publicly used structures and areas, administrative areas, some visitor overnight accommodations, and some employee housing, when provided, and most interpretation and visitor services, will be designed, constructed or renovated to provide maximum accessibility to wheelchair users.

The **undeveloped areas,** such as the part of the park that is outside the immediate influence of buildings, roads, and cars, will not **normally** be modified nor will special facilities be provided for the sole purpose of providing access to disabled people.

Accessibility in **threshold areas,** such as scenic overlooks, nature trails, features of special interest, or wayside exhibits that are reached by short walks that lead from developed areas to the edges of the undeveloped ones, will be judged on an individual site-by-site basis depending upon the nature of the topography, the significance of the attraction and the amount of man-made modification provided. If the attraction is a significant one, every reasonable attempt should be made to make the feature as accessible as possible. On the other hand, if the amount of man-made modification is very low and the accessibility modifications would result in significant damage to the natural environment, alternative methods to provide the interpretive information or experience should be considered and utilized.

Accessibility in Visitor Transportation Services

The policy of the National Park Service is to make all appropriate land transportation systems and services, whether provided by the Service or by concessioners, accessible to and usable by physically disabled persons unless doing so would alter the fundamental nature of the service. This should be accomplished by making a sufficient percentage of the vehicles wheelchair accessible, on a replacement or retrofit basis, so as to provide effective services. Until this goal is realized, a separate accessible vehicle will be provided or a disabled person will be allowed to drive their personal vehicle on otherwise restricted roadways. It is Service policy that no new roads will be developed for the sole purpose of providing disabled visitors access to a given area. However, within the existing road system, efforts will be made to provide for specialized transportation needs.

Accessibility will also be provided in water transportation systems. The degree of priority in making them accessible will depend on the degree of accessibility of the area being served by the system. On scenic cruise vessels, the optimal level of wheelchair access that is feasible will be provided.

CULTURAL RESOURCE MANAGEMENT AND PRESERVATION

For cultural properties, the National Park Service will provide the highest level of access possible while still conforming to cultural resources management policies and use and treatment standards (NPS-28). Every attempt will be made to create physical accessibility for disabled persons to as much of the property as possible without impairing the property's cultural significance. Where accessibility cannot be achieved within NPS-28, alternative solutions will be provided in an accessible location.

USE OF THE PARK

Program Accessibility for Disabled Persons

It is the policy of the National Park Service to assure that, to the extent possible and reasonable, all interpretive programs, recreational activities, concession operated and privately sponsored activities, publications, and any other information provided to the park visitor and or employee shall be provided in such a way that disabled people can receive as close to the same benefits as the non-disabled person. This will include taking appropriate steps to assure that information provided in auditory ways is also available for hearing impaired persons; that information provided visually is also available to those with visual impairments; and that information provided in areas that are not architecturally accessible to physically disabled persons is also provided to the extent possible in accessible locations.

Off-Road Use of Vehicles and Motorized Equipment

Disabled visitors will be bound by the same ORV regulations and restrictions as other visitors, and by the same park road limitations on size and weight of vehicles. Standard electric wheelchairs will be excluded from prohibitions against motorized vehicles. Motorized vehicles (other than electric wheelchairs) used as mobility aids may be permitted at the Superintendent's discretion.

CONCESSIONS MANAGEMENT

Accessibility for Disabled Persons in Concession Operations

Within the parks and in the promotional material distributed publicly, concessioners share the Service's responsibility to provide access insofar as it pertains to the facilities and services they provide, recognizing the constraint of existing contracts and agreements. It is Service policy that, where contracts have some years to run, the National Park Service will strongly encourage concessioners or other contractors to voluntarily make gradual progress toward an agreed upon level of accessibility, and when new contracts are negotiated, those requirements and a schedule for achieving them will be included in the new agreement.

INTERPRETIVE PROGRAM ACCESSIBILITY CHECKLIST

REGION CODE: **PARK/AREA NAME:** **SURVEYOR:** **TITLE:**

	N/A	YES	NO	COMMENT
I GENERAL PUBLIC INFORMATION				
A. Mobility Impaired: Do brochures, fliers, signs, staff provide descriptions of the park and its environs which would enable disabled visitors to know of the physical requirements and other aspects of specific park resources?				
Is information on the availability and location of accessible convenience facilities provided?				
B. Hearing Impaired: Do brochures, fliers, signs, staff provide information on the availability and location of alternative interpretive devices?				
Is there TTY-TDD capability at the site to provide pre-site information to deaf individuals?				
C. Visually Impaired: Do brochures, fliers, signs, staff provide information on the availability & location of alternative interpretive devices?				

	N/A	YES	NO	COMMENT
II MAJOR CONTACT STATION (Entrance Station, Visitor Center Information Desk, Roadside Information Booth, Roving Patrol, Campground Office)				
A. Mobility Impaired: Is facility physically accessible and, if not, is there an alternative location?				
Is accessibility information on the site, facilities, and programs provided?				
Is the International Symbol of Access visibly located at locations providing accessibility information?				
B. Hearing Impaired: Are all available materials and services (e.g. audio transcriptions, sign language staff) made known through prominent display of International Symbol for Deaf?				
C. Visually Impaired: Information provided in print — is it also available in:				
— audio				
— large print (18 point or ¼")				
— Braille				
III PERSONAL SERVICES (campfire talk, guided walks, talks, tours, living interpretation, cultural demonstrations)				
A. Mobility Impaired: Are personnally led programs conducted in physically accessible locations?				

	N/A	YES	NO	COMMENT
If not, does the park provide alternatives to enable visitors to experience the area through some other format (e.g., historic facility/site tour — a-v devices, photographic albums, rerouting visitor traffic, ramps at another entrance, etc.)?				
Do these program locations have accessible parking areas?				
Accessible support facilities (restrooms and water supply)?				
Is there an accessible path of travel from parking area/support facilities to programs areas?				
Are allowances made for wheelchairs in the program seating area?				
Are there any means of transportation (tour buses, trains, boats, etc.) used as part of the conducted interpretive program? If so, are they physically accessible?				
If not, are alternative means of transportation allowed or provided?				
B. Hearing Impaired: Is verbal interpretation available in print?				
Is there a staff member skilled in sign language interpretation?				
Does he/she wear the Service's official "I sign" pin?				
Are programs using sign language interpreters periodically scheduled and advertised during the season?				

	N/A	YES	NO	COMMENT
C. Visually Impaired: Are park interpreters familiar with the Sighted Guide Method to provide blind visitors with directional/orientational assistance, if needed?				
For significant landmarks, artifacts or displays requiring visual appreciation, do interpreters utilize descriptive and concrete language?				
During the interpretive delivery, does the interpreter include items that can be touched?				
IV SELF-GUIDING PROGRAMS				
A. Mobility Impaired: Are self-guiding programs located in physically accessible locations?				
Do these program locations have accessible parking?				
Support facilities (restrooms, and water supply)?				
Is there an accessible path of travel from parking area and support facilities to program areas?				
Does park have interpretive trails designed for accessibility?				
Does trail(s) have a hard surface which will allow for the easy passage of wheelchairs, as well as a minimum width of 48"?				
Does the trail(s) have an extended grade that does not exceed 5° (1 foot rise/12 foot run) with shorter grades not exceeding 10°?				

	N/A	YES	NO	COMMENT
On longer trails: (1 mile or 1 hour) are there sheltered rest areas?				
Do these rest areas include benches having back and arm rests?				
Is there an accessible convenience facility and water facility? (source)				
Is there a cut-off loop along trail?				
If there are barriers or walls along trail, are they low enough not to obstruct the overlook view for a visitor in a wheelchair?				
Does the self-guiding program include **printed** or **sign information** which relates the trail length, travel time, degree of difficulty, list facilities provided along the trail, and include any special precautions or preparations which may be needed?				
B. Hearing Impaired: For audio elements incorporated in a self-guiding program (e.g., cassette tapes, message units on wayside or indoor exhibits) — is the information also available in print?				
C. Visually Impaired: Park self-guiding materials — are they available in audio form?				
Do materials include such information as trail length, trail conditions, possible hazards and cues for that kind of information?				
Have cassettes developed for blind or visually impaired visitors been tested **on site** by staff and blind consultants before public distribution?				

	N/A	YES	NO	COMMENT
Is the taped program highly descriptive **in language** providing all the relevant park resource information normally acquired through sight (e.g. landmarks, overlooks, wayside stops, etc.)?				
Does the trail designed for accessibility have contrasting trail and walkway surfaces?				
V EXHIBITS, SIGNS, LABELS, PUBLICATIONS, A-V PROGRAMS				
A. Mobility Impaired: Are park's signs, labels and exhibits designed to be accessible to visitors in wheelchairs and with mobility impairments?				
Exhibits — Can exhibits be approached and viewed from a wheelchair with a maximum and minimum reading height of 65" and 54", respectively?				
Horizontal exhibits (e.g. models, relief maps, display tables) — Is the **bottom** surface a minimum of 30" from ground level to allow for a frontal approach?				
Is the height of the horizontal **top** surface designed to be viewed from an average eye level height of 48"?				
Items to be manipulated on exhibits (e.g. activating buttons, turnknobs, etc) — Are they mounted at a maximum height of 54" allowing a side approach and a maximum height of 48" allowing a frontal approach?				
Objects to be handled (e.g. books, publications, artifacts, relief maps, and tactile exhibits) — Are they placed at a maximum height of 48", minimum height of 9" from ground level, and within a 24" reach?				

	N/A	YES	NO	COMMENT
A-V Programs — are locations where movies, slides, or video programs shown physically accessible?				
If not, are there alternative locations?				
For inaccessible interpretive programs (e.g. self-guiding walks, tours, demonstrations, etc.) — has the interpretive message been filmed, taped, photographed or video-recorded and made available at an accessible location?				
B. Hearing Impaired: Is relevant park interpretive information which incorporates audio elements captioned or transcribed in print?				
If so, is it advertised?				
Auditoria — are headphones with volume controls, wireless, or infrared systems available for hearing impaired visitors?				
If so, is it advertised?				

	Captioned	In Print
Films		
Video		
Slide presentations		
Self-guiding cassettes		
Exhibit message units		

	N/A	YES	NO	COMMENT
C. Visually Impaired: Exhibit interpretive information — is it also available in:				
audio?				
large print (18 point or ¼")?				
braille?				
Exhibit design — is there use of adequate and even lighting?				
. . . high contrast colors on photographs?				
. . . non-glare glass?				
Interpretive labels — are they designed for maximum contrast (dark on light background or vice versa)?				
Display areas — is there use of 3-D relief maps, models, or actual objects that can be touched by blind visitors?				
Interpretive signs — are they routed or raised?				

Size of type	Viewing distance
¼"-½"	4'
⅝"	6'
2½"	30'
4"	60'

International Symbols of Access

The use of signs to convey information to visitors is an important part of park planning. It is equally important that facilities, programs and services that have been made accessible to disabled persons be publicized to enhance usage. The wheelchair logo has become a widely recognized symbol of access. It is often used in parking lots to indicate reserved stalls, and in buildings to indicate accessible restrooms, etc. It can also be used in conjunction with directional symbols or a written message such as "Ask for Information Here," which tells the visitor that there are other services available. Such services may be interpretive cassettes, the availability of a wheelchair for loan, accessible transportation services, etc.

Another symbol that is becoming widely used is the International Symbol of Deafness which should be used to indicate programs and identify or show the way to buildings, facilities and devices that are accessible to and usable by deaf or hearing impaired persons. For example: offices that have TDDs, the availability of interpreters, captioned films, printed interpretive material, etc.

These symbols should also be used in park informational materials such as maps, program announcements and information, and park brochures, to indicate accessibility. Care should be taken in the use of these symbols. For instance, a building which has an accessible entrance should not have the access symbol displayed unless the facilities/services **inside** the building are also accessible.

Below are copies of these two symbols. Decals are available from the Branch of Special Programs and Populations, WASO.

Audio-Visual Training Resources

"A Different Approach" (21 minutes)

This film promotes the abilities of disabled people. The producer proves to his employer that serious thought with humorous overtones can be an effective way to approach attitude change. Although originally intended for use as an employment film, this is an excellent awareness film highlighting the abilities of disabled people.

Source: South Bay Mayor's Committee for Employment of the Handicapped, Inc.
2409 N. Sepulveda Blvd., Suite 202
Manhattan Beach, CA 90266

"It's A New Day" (9 minutes)

This film demonstrates the many different types of assistive devices some disabled people use in their everyday activities. It features disabled people working in varied job situations, participating in recreation activities and visiting parks.

Source: South Bay Mayor's Committee for Employment of the Handicapped, Inc.
2409 N. Sepulveda Blvd., Suite 202
Manhattan Beach, CA 90266

"Outside" (30 minutes)

This upbeat film features people with spinal cord injuries as they talk about their lives. Many scenes feature outdoor recreation and park activities.

Source: Access, Inc.
177 South Lookout Mountain Road,
Golden Colorado 80401

"What Do You Do When You Meet A Blind Person?" (13½ minutes)

This film uses a humorous approach to demonstrate the right and wrong ways of interacting with blind people in various situations.

Source: American Foundation for the Blind
15 West 16th Street
New York, New York 10011

"Museum Accessibility for the Visually-Impaired Visitor" (14 minutes)

This film demonstrates various techniques for making exhibits/displays accessible. Although geared toward museum exhibits, the techniques can be applied to many different types of interpretive programs.

Source: Audiovisual Program Coordinator, OMP
Room 2235 Arts and Industries Building
Smithsonian Institution
Washington, D.C. 20560

"Communication: More Than Sounds" (10 minutes)

This film gives general information on assisting hearing impaired visitors. It also includes suggestions for working with sign language interpreters when giving programs attended by hearing impaired persons.

Source: Audiovisual Program Coordinator, OMP
Room 2235 Arts and Industries Building
Smithsonian Institution
Washington, D.C. 20560

These films are also available for loan from the Special Programs and Populations Branch, WASO (FTS 343-3674)